TRALEE AND DINGLE LIGHT RAILWAY AND TRAMWAY.

COPY OF REPORT

TO THE

BOARD OF TRADE

BY

MAJOR FRANCIS ARTHUR MARINDIN, R.E., C.M.G.,

WITH

RICHARD ADAMS, ESQ., Q.C., LEGAL ASSESSOR,

OF THE

INQUIRY INTO THE ACCIDENT AT CAMP ON MAY 22, 1893,

HELD IN

TRALEE COURT HOUSE ON JUNE 7TH, 8TH, 9TH, AND 10TH, 1893,

TOGETHER WITH THE

EVIDENCE AND APPENDICES.

Presented to both Houses of Parliament by Command of Her Majesty.

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1893

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TRALEE AND DINGLE LIGHT RAILWAY AND TRAMWAY.

Board of Trade, 8, Richmond Terrace, Whitehall,
London, S.W., 28th June 1893.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, that, in compliance with the instructions contained in the Order of the 29th ultimo, under the provisions of the "Regulation of Railways Act, 1871," 34 & 35 Vict., c. 78., s.s. 7 and 8, I have held a public and formal inquiry into the causes of, and the circumstances attending, a fatal accident which occurred on the 22nd ultimo near Camp, on the Tralee and Dingle Light Railway and Tramway, being assisted by Mr. Richard Adams, Q.C. The inquiry was opened in the court house at Tralee on Wednesday the 7th instant, and was continued upon the three following days, 25 witnesses being examined during the proceedings. Upon the 7th instant, accompanied by Mr. Adams, I made an examination of the scene of the accident, and upon Sunday the 11th instant I travelled over the line with an experimental train, composed of the same number and description of vehicles as that to which the accident happened, but not of the same weight, as the cattle waggons were not loaded.

The following gentlemen appeared to represent certain interested parties, viz.:—

Mr. Thomas Huggard, solicitor, for the Tralee and Dingle Light Railway Company.

Mr. T. Harrington, M.P., instructed by Mr. Murphy, for the Tralee Commissioners.

Mr. B. O'Connor Horgan, solicitor, for the guard of the train, Thomas O'Leary, and for two injured persons.

Mr. Charles Morphy, solicitor, for the representatives of the deceased driver, Alfred Redshaw, for Lord Ventry, and for other ratepayers.

Mr. Daniel G. O'Reardon, solicitor, for two injured persons.

I am indebted to these gentlemen for the assistance rendered by them in the investigation, and to the Company for plans and sections of the line, and drawings of the engine and rolling-stock.

The evidence, which was given on oath, was taken down verbatim, and is appended to this report.

History of the Railway.

The Tralee and Dingle Light Railway and Tramway was constructed under the Act of 1860, 23 & 24 Vict., c. 152, "*to facilitate internal communication in Ireland by " means of Tramroads or tramways*," as amended by subsequent Acts of 1861, 1871, 1881, and 1883.

In accordance with the provisions contained in these Acts, the undertaking, promoted in 1884, was in July 1884 considered and approved by the grand jury of Kerry and by the Town Commissioners of Tralee, who had before them the deposited plans and sections, the report made by the county surveyor, dated 5th July 1884, and the report of the Board of Works, dated 11th July 1884, copies of which are attached. The scheme was unopposed, was duly passed by the Committee of the Privy Council, and the construction of the line, in accordance with the plans deposited, was finally authorised by an Order in Council, dated 17th September 1888; a copy of the plan being afterwards sent to the Board of Trade, in pursuance of section 52 of the Order in Council, on the 15th October 1888.

There were deviations authorised in 1889, but these were not within some distance of the scene of the accident, and do not affect the case under consideration.

The line was commenced in 1888, was finally completed in 1891, and, under the powers conferred by the Regulation of Railways Act, 1842, 5 & 6 Vict. c. 55, ss. 3, 4, 5, and 6 (copies of which sections are appended), was inspected by the Board of Trade in December 1890, and re-inspected in March 1891, in which month it was opened for traffic.

The entire capital of the line is 150,000*l*., all of which has been expended, and on 120,000*l*. of which there is a guarantee of 4 per cent. interest by the cess payers of three Baronies and the Tralee Sanitary District in the following proportion, viz.:—

	£
Corkaquiny	60,000
Clanmaurice	15,000
Trughenackmy	39,000
Tralee (Sanitary District)	6,000

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The Treasury recoups the guaranteeing bodies to the extent only of 2 per cent. on 120,000*l.*, and these bodies are liable for any excess of the working expenses of the line above the income, which excess during the past year amounted to about 2,600*l.*

Description of the Line.

The line is single, except at stations, and the gauge is 3 ft.

The main line from Tralee to Dingle, on which the accident happened, is 31 miles 52 chains in length, of which 27 miles 61 chains are laid along the side of the public road, and may be considered as a tramway, the remaining 3 miles 71 chains being a light railway through fields and mountain land.

The permanent-way, which is laid in accordance with the specification, mostly consists of :—

1. Flat-bottomed steel rails, weighing 45 lbs. per yard, fished at the joints, and secured to the sleepers by six ⅜-inch fang-bolts, and 16 dog-spikes, to each 30-ft. rail.
2. Transverse sleepers of larch, Scotch fir, or oak, laid 1 ft. 8 in. apart at the joints, and 2 ft. 10 in. apart elsewhere, the smallest of the sleepers being 5 ft. 11 in. in length and 8 in. × 4 in. in section.
3. Ballast of broken stone.

The steepest authorised gradient has an inclination of 1 in 30, and the sharpest authorised curve has a radius of 3 chains.

Scene of the Accident.

The scene of the accident was near Camp Village, 10 miles 59 chains from Tralee, at the west end of Curraduff Viaduct over the small River Finglass, the rocky bed of which is 31 ft. 3 in. below the level of the rails. The viaduct has two masonry arches of 35 ft. span on the skew, with a masonry parapet, and it is upon a 3-chain curve.

This curve, which extends from 10 miles 54½ chains to 10 miles 61 chains, is provided with a check rail inside the low rail, and the high rail has a super-elevation of between 4¾ ins. and 5 ins. Upon this curve the low rail and check rail are laid on cast-iron chairs, secured to the sleepers by large fang-bolts (Great Southern and Western type), the high rail is secured to the sleepers by 11 large fang-bolts in each 30-ft. length, with alternate spikes, and, as upon other sharp curves in the line, iron tie-bars are fitted to hold the rails to gauge.

The curve is a left-handed one to trains running from Dingle to Tralee, and it is approached from the west by a piece of straight line 6 chains in length, following a right-handed curve of 9 chains radius.

The summit level of the railway is at 13 miles 60 chains, or about 3 miles west of Curraduff Viaduct, and from this point the line falls steeply to the viaduct, the gradient shown on the authorised plan being as follows :—

Falling 1 in 31 for 1 mile 52 chains, falling 1 in 30 for 1 mile 1 chain, horizontal for about 3 chains, falling 1 in 30 for 23 chains, and then horizontal for about 7 chains across the viaduct.

These gradients have been slightly modified, and to some extent improved, for there is a length of 16 chains on 1 in 35 half-way down the incline, and, at the foot of the incline, instead of the 1 in 30 gradient running suddenly out on to a horizontal piece across the viaduct, the gradients from Camp Village to the viaduct, a distance of a quarter of a mile, are actually 1 in 35, 1 in 80, and 1 in 100 across the viaduct.

From the summit, at 13 miles 60 chains, to Skylough level crossing, at 12 miles 36 chains, the line is a railway through fields, but from this point to Camp Village it is for nearly the whole distance a tramway along the side of the road, the last few chains from Camp to Curraduff Viaduct being again off the road.

Description of Train.

The train to which the accident happened was a special fair train timed to leave Dingle at 1.5 p.m., Lispole at 1.30 p.m., and Aunascaul at 2 p.m., and to arrive at Castle Gregory junction at 3.10 p.m. and Tralee at 4 p.m.

It was made up as follows :—Engine, seven cattle waggons laden with pigs, one third-class carriage, and guards van.

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The following are the weights and lengths over the buffers of the different vehicles composing the train:—

—	Weight.		Length over Buffers.	
	Tons.	Cwts.	Ft.	In.
Engine (with tank and bunker half full)	28	0	28	11
Cattle waggon	2	15	16	1
Third-class carriage	3	10	29	1
Guard's van	2	15	16	1

The passenger carriage had two four-wheeled bogies, and the cattle waggons and the guard's van were four-wheeled vehicles.

The total length of the train, including the engine, was 186 ft. 8 ins., and the total weight, including the weight of the engine, and the weight of the passengers and the live stock (estimated at 2½ tons, and 14 tons respectively), was 70 tons.

Description of Engine.

The engine was built by the Hunslet Engine Company at Leeds, was used by the contractors when constructing the line, and was handed over to the Company in 1891.

It is an eight-wheeled tank-engine, with six wheels coupled, and a leading two-wheeled bogie poney truck. The centre pair of the coupled-wheels are not flanged.

The wheel-base is as follows:—

	Ft.	In.
Bogie-wheels to leading-wheels	6	10
Leading-wheels to driving-wheels	4	3
Driving-wheels to trailing-wheels	4	6

The estimated weights on the different pairs of wheels, with tanks and bunker full, are:—

	Tons.
On bogie-wheels	6¾
On leading-wheels	7¾
On driving-wheels	7¾
On trailing-wheels	8½
Total	30¾

The diameter of the coupled wheels is 3 ft. ½ in., and that of the bogie-wheels is 2 ft.

The diameter of the cylinders is 1 ft. 1 in., and the length of stroke is 1 ft. 6 ins.

The repair books in the shops do not seem to have been very carefully kept, but, as far as can be gathered from the evidence, this engine was put into a proper state of repair when it was first acquired by the Company, and was last thoroughly repaired in November 1892, since which time it has run 8,695 miles. It was also in the shops for repairs on 14th February, 18th March, 24th to 26th March, and 20th to 22nd May. Upon this last occasion a new right-hand side trailing-spring was put in, and the brake-blocks were adjusted, and it was stated in evidence that it was in good running order when it left the shops.

Brakes.

The whole train, including the cattle waggons, was fitted with the automatic vacuum-brake, capable of being applied by the driver, or by the guard if necessary, and working blocks upon every wheel on the train, except the bogie wheels of the engine, so that, out of the total weight of 70 tons, 63½ tons were upon braked wheels.

In addition to this there were ordinary screw hand-brakes upon the engine and the guard's van, and side levers for working the blocks on one pair of wheels of each of the cattle-waggons.

The automatic vacuum-brake was supplied by the Vacuum-Brake Company, and, although the parts were in proportion to the size of the stock, and therefore smaller than those fitted to ordinary trains, they were of the usual pattern, except that the valve in the guard's van was not fitted so as to open automatically upon a sudden application of the brake by the driver.

Mode of Working.

The line is ordered by the Board of Trade to be worked, and the Company has given an undertaking to work it, dated 2nd March 1891, in accordance with the following rule:—

"The line between (1) Tralee and Camp Junction, (2) Camp Junction and " Aunascaul, (3) Aunascaul and Dingle, (4) Camp Junction and Castle Gregory, " shall be worked by only one engine in steam, or by two or more coupled together, " at one and the same time, such engine or engines to carry a distinct staff for each of " such sections."

Limits of Speed.

The speed of trains throughout this light railway is limited by the Order in Council to 25 miles an hour at any point, and by Board of Trade Order, dated 13th May 1891, issued after the inspection of the line, and following the special recommendations of Major-General Hutchinson, C.B., the officer who made the inspection, the speed was restricted at certain places, to the following extent, viz.:—To 12 miles an hour where the railway is laid along the side of a road, to six miles an hour through any town or village, to two miles an hour at certain street and road crossings, and to five miles an hour.

(1.) At the oblique crossings of all roads when approached on the level or on a falling gradient;

(2.) On the sharp curves on each side of the viaduct at 10 miles 58 chains on the journeys from Dingle to Tralee.

A further limit was imposed by the Company, enjoining a speed of six miles an hour all the way down the incline from Glen-na-galt to and beyond Curraduff Viaduct as will be seen from the following extracts from the instructions issued to the servants of the Company, applying, among other matters, to the use of brakes and speed of trains:—

"Instructions to Engine Drivers and Guards.—Before starting at the beginning of " each journey the train must be examined to see that the brake fittings are in good " working order and tested, also that the engine and all vehicles are properly coupled " and in working order, and that the tender hand-brake is in proper working " condition, and carriage and waggon axles oiled and trimmed."

* * * * *

" Before starting the guard must see that the proper vacuum is registered by the " indicator in his van for the effectual use of the brake.

"All up trains must come to a dead stop at the top of Glen-na-galt incline, and, " if more than three vehicles are on, to pin (*sic*) down the waggon brakes, and the " speed to Scrallaghbeg Cottage not to exceed six miles an hour. After passing this " point the brakes may be lifted. The engine hand-brake must also be used on this " incline."

* * * * * *

"Speed of Trains, &c.—The speed of trains on approaching the junction should " not exceed five miles an hour, and should be reduced to two miles an hour when " passing over the facing-points. Drivers must be prepared to pull up at once if at " any station or gate the signals are against them.

"The speed between Tralee terminus and Great Southern and Western Company's " terminus not to exceed two miles an hour. The speed over the crossings on the " line to be reduced to 10 miles an hour, and over the crossings near Tralee to five " miles an hour. The speed on the county roads, where the line is tramway not to " exceed 12 miles an hour, and where the line is fenced off not to exceed 25 miles " per hour, slowing off to 10 miles an hour for the sharp curves or down the steep " gradients of 1 in 30.

"The drivers must always be prepared to pull up if necessary when on the road in " passing restive horses, cattle, &c.

"In crossing the road at Blennerville from the curve to the station the speed must " on no account exceed two miles an hour.

"In crossing the road at 17¾ miles not to exceed two miles an hour.

"At the oblique crossings of all roads the speed must not exceed five miles an hour.

"On the sharp curves on each side of the viaduct at 10 miles 58 chains not to
" exceed five miles an hour.

"In crossing Lispole Bridge 10 miles an hour."

Details of the Accident.

The train, due to leave Dingle at 1.5 p.m., did not start until about 1.30 p.m., according to the evidence of the guard, who speaks from recollection only as he has lost his notes, and it seems, from the description given by this man, to have lost time all the way. It was in charge of Alfred T. Redshaw, the locomotive superintendent of the line, acting as driver, with fireman Richard Dillon, and permanent-way inspector Bernard Loughlin on the engine, and guard Thomas O'Leary in the guard's van. The vacuum-brake was, by the direction of the driver, and in spite of the guard's remonstrance, cut off before the train started, in order to save the steam which it is necessary to use in keeping the small ejector running, and, in consequence apparently of having no continuous brake in working order, the train, which left Lispole at about 2 p.m., overran the station at Aunascaul, which is near the foot of a steep incline, by a considerable distance, and had to set back past the station to take water at the water-column.

The guard then refused to travel any further without the brake being brought into use, and the train started with a vacuum of about 16 inches, but had not proceeded for above 200 yards when it came to a standstill on a rising gradient of 1 in 32, and had to back into the station again to make a fresh start. After re-starting it again got into difficulties, which, as described by the guard, continued for the greater part of the way to Emalough, a distance of 2¾ miles, the engine coming to a stand at several places, and being unable at two places at least to start again for nearly half an hour.

About half way up the incline, between Emalough and the summit, the train again stopped, and, after some discussion between the guard and the driver, the vacuum-brake was cut off upon reaching a level piece of line, and the train proceeded without any further stop until it reached Glen-na-galt, the summit, where, as usual, it was brought to a stand.

In accordance with the regulations the side levers working the waggon-brakes were then pinned down by the guard, assisted by the permanent-way inspector Loughlin, who was riding upon the engine throughout the journey, and after a short delay the driver, after blowing up the vacuum to 17 inches, as stated to be shown by the gauge in the guard's van, started his train. It is unfortunate that there is no accurate record of the time and place of all the delays, and of the time at which the train commenced the descent of the incline to Curraduff Viaduct; but, whereas this train was due at Castle Gregory junction, three-quarters of a mile beyond Curraduff Viaduct, at 3.10 p.m., it would appear from the evidence of Walter Darey that the accident occurred soon after 20 minutes to 5 p.m., and therefore probably the train left Glen-na-galt at about 25 minutes to 5.

Owing to the death of all the men (three) upon the engine, the only servant of the Company who can speak to the subsequent events, between the time that the train left Glen-na-galt and the time at which the accident happened, is the guard, Thomas O'Leary, and according to his statement, the driver made an unusually quick start, and entirely lost control over his train very soon after it had started, but, judging from the evidence of John Driscoll the gatekeeper at Skylough crossing, about a mile down the incline, and to some extent from the evidence of Mr. Singleton Goodwin, the county surveyor, who, when walking towards Castle Gregory junction, saw the train from a distance, the speed at this point, although greatly in excess of the regulated speed of six miles an hour, does not appear to have been so great as the guard estimates it to have been. However, whether or not the driver had lost control over his train before reaching Skylough crossing, it is certain that he must have done so shortly afterwards, for there is little doubt that when the train reached the viaduct the speed was very high, probably nearly 40 miles an hour, and after entering the sharp curve west of the viaduct the engine left the rails on the right-hand side over the high rail of the curve, and with the exception of the rear van which remained upon the line, across the rail, with the leading end against the parapet of the viaduct, and with the coupling broken, and, the third-class carriage which came to rest upon the embankment, with the leading end downwards, the whole train was precipitated into the bed of the river, the waggons being piled up in a heap and completely wrecked, and the engine being found on its left side at the far side of the river, 49 yards from the point where it left the rails, turned nearly at right angles to the line, with the leading end pointing towards the viaduct.

The cab was detached, and the three men who had been riding on the engine were underneath it terribly injured, Redshaw living for only a few minutes, and Dillon and Loughlin dying the same evening after their removal to Tralee.

There were about 37 passengers in the train, nine of whom were in the guards van, which remained on the line, and the remainder in the third-class carriage, and of these passengers it is stated that 13 were injured, some of them seriously.

(A nominal roll of the killed and injured persons is appended).

There were about 50 pigs killed and a great number injured, the engine and seven cattle waggons were practically destroyed, and the passenger carriage and guard's van were much damaged.

Causes of the Accident.

In this case it is most remarkable that there was no trace left upon the top of either the high rail of the curve, or the check rail inside the low rail, of any wheel flange running over the rail, that there was very little disturbance of the road, and that the first mark upon the permanent-way of any wheel having left the rails was outside the high rail upon the end of a sleeper. There was a cut upon this sleeper, the thirtieth sleeper east of the commencement of the check rail, and 78 feet east of the commencement of the 3-chain curve, the 22 next sleepers towards the viaduct had the ends cut off, and two sleepers were driven forward, the fastenings under the high rail being drawn, but the fastenings under the low rail and the check rail not being disturbed.

The radius of the curve at the point where the first mark occurred was three chains, and, although nearer to the viaduct I found that the curve became sharper, having a radius of only 2½ chains, that was probably due to the line being somewhat hastily restored after the accident.

The gauge round the curve was fairly regular, ranging between ⅝ in. and 1 in. slack, and the super-elevation was even, being between 4¾ ins. and 5 ins. The check rail was not much worn.

There was nothing whatever in the condition of the line, or of the engine, to lead to the conclusion that the run-off was caused, or was contributed to, by any fault in the permanent-way or rolling-stock, and it may be as well here to mention that, although it was hinted in the evidence of Mr. Hickson, the engineer of the line, that a fang-bolt which was found in the bed of the river two days after the accident might have been upon the rail where the engine ran off, there was no such mark upon either the fang-bolt or the rail as would probably have been found if the bolt had been run over by an engine wheel when lying upon the rail, and I am satisfied that the accident was not due to any obstruction of this kind or to any interference with the rails elsewhere.

It is indeed quite unnecessary to search for any explanation of the fact of the engine leaving the rails, beyond the speed at which both the evidence, and the position of the train after the accident, show that it must have been running, and it is perfectly clear that the immediate cause of this deplorable disaster was excessive speed upon a very sharp curve, where the Board of Trade have imposed a limit of five miles an hour, which limit cannot be disregarded with safety.

It is, however, not so easy to account for the train having been allowed to attain such a high rate of speed in coming down the incline from Glen-na-galt, and the fact that, owing to the death of the three poor fellows who were upon the engine, there is no direct evidence forthcoming as to the action of the driver, the pressure of steam upon the engine, or the behaviour of the vacuum-brake after leaving the summit, makes it all the more difficult to come to a positive conclusion.

What is almost certain is, that the evidence of the guard, which is the only evidence referring to the application of the continuous-brake, cannot be absolutely correct; but it is not to be wondered at that a man in his position should be unable to remember, with entire accuracy, the sequence of events during the terrifying journey down this incline.

He states that the whole of the waggon-brakes were pinned down before the train started from the summit, as no doubt they were, that the driver blew up the vacuum to 17 ins., which it may be remarked was 1 in. under the amount at which it is ordered to be maintained, that the engine was started at an unusually high speed, that he at once put on his hand-brake, and that the vacuum-brake was applied at full power before the train had run for more than 20 or 30 yards.

Now, however sharply the engine was started, it could hardly have attained such a speed in a distance of 30 yards, with the brakes pinned down upon seven out of the nine vehicles in the train, and the guard's brake applied upon another, that it would not have been brought to a stand if the vacuum-brake had been applied and kept on at full power, even with the rails in the worst possible condition for stopping upon as they undoubtedly were upon that afternoon, and with only 17 ins. of vacuum.

It may therefore, I think, be assumed that, if the guard be correct in stating that there were 17 inches of vacuum when the train started, he is mistaken as to the point where the brake was first applied at full power.

The guard says further, and he is supported by the evidence of Thomas Rearden one of the passengers in the van, that he did not open the valve in his van to apply the vacuum-brake, until just before the engine went over the embankment, although he did release and re-apply his hand-brake about a mile down the incline, when he thought that the wheels of his van were skidding.

He believesthat the vacuum-brake remained on all the way down, at least he did not at any time perceive any indication upon his dial of the driver having blown up the vacuum; but, as he was for part of the time looking out of the window, he may be, and probably is, mistaken on this head.

He estimates the speed at 30 miles an hour at Skylough crossing, and at that point was under the impression that the driver had lost control over his engine, and he describes how rapidly the speed increased, although he states that he could see fire flying from the engine wheels, which were evidently skidding at the time.

It appears from the evidence of the fitter, Charles Ellerker, that the brake-blocks on the engine had been adjusted that morning, and that the brake upon this engine when it was attached as pilot-engine to the morning train fromTralee to Dingle worked satisfactorily, as also appears to have been the case from the evidence of driver Harry Quinn, who was driver of the train-engine on that train; while the carriage-examiner, James Murphy, states that, when the vehicles composing the train were last examined at Tralee, at a date which he cannot fix, but believes to have been about two or three days previously, the brakes upon them were in good order.

In order to ascertain what would be the effect of the application of the vacuum-brake upon a train of nine vehicles, running at different speeds, upon inclines of 1 in 32 and 1 in 30, I arranged to travel up from Dingle on a train made up exactly in the same order as that to which the accident happened, and, although it was not practicable to have the train loaded in a similar manner, and the rails were in very good condition, instead of being very greasy as upon the afternoon of the accident, the experiments, while they cannot be taken as an absolute indication of what probably happened upon that occasion, were not without value.

The total weight of the train was 25 tons 10 cwt., or 55 tons 10 cwt. including the engine, but excluding the weight of the few people who were travelling in it, while the engine, the only one available, weighed about 2 tons more than the No 1. engine, the one which was wrecked by the accident.

I found that with 120 lbs. of steam the vacuum could be blown up to 20 inches in 15 seconds, by the use of the large ejector, but that a vacuum of only 11 ins. could be obtained by the small ejector in four minutes; that when the valve in the guard's van was fully open, after applying the brake, a vacuum of 15 inches could be obtained by the use of the large ejector, but that the brake-blocks remained on upon half the train; that when the brakes were applied, and both ejectors shut, the brakes leaked off all the vehicles except the engine and four waggons, in 7½ minutes, and off the whole train in 9 minutes; that when the small ejector was not kept running the vacuum sank to 5 ins. in ¾ minute, and to zero in 2½ minutes; and that with 79 lbs. of steam it was possible to obtain a vacuum of 15 ins., but no more. One of the washers on a connecting hose-pipe had been found to be defective, and was replaced, but it was evident from the above results that there was a leak in some other place which could not be detected, and this was also shown by the fact that, when running, with the brake-handle in the running position and the small ejector therefore open, the vacuum could not be maintained above 15 ins., and the large ejector had to be used to blow up the vacuum before applying the brake. The following were among the stops I made on the journey:—

1. Gradient, falling 1 in 30; speed, 24 miles an hour: 20 inches of vacuum. Stopped in 120 yards by use of the vacuum-brake only.
2. Gradient, falling 1 in 32; speed, 25 miles an hour; 17 inches of vacuum. Stopped in 156 yards by use of the vacuum-brake only.

3. Gradient, falling 1 in 32; 17 inches of vacuum; started as sharply as possible from rest; vacuum-brake applied after running 50 yards. Stopped train in 50 yards.

In coming down the incline to Curraduff with the waggon-brakes pinned down, the engine hand-brake on, and the guards-brake rubbing, the speed never exceeded seven miles an hour, although the vacuum-brake was only once momentarily applied.

The result of these experiments certainly confirmed my opinion, that, if proper care be used, the brake power available on these trains is ample to enable a driver to keep control over his train on the incline of 1 in 30, even if the brakes are in a somewhat leaky condition, as was the case in the train by which I travelled.

If, however, a driver with a brake in this condition were to allow his train to get at all out of hand, it is probable that, unless he were very experienced in the handling of the brake, he would soon find himself without any brake power left.

It is clear from the evidence that the driver of the train to which the accident happened had the greatest possible difficulty in maintaining a proper head of steam when coming up from Dingle to Glen-na-galt, so much so, that he deliberately acted in contravention to the well understood rule, and most improperly put the vacuum-brake out of work altogether in order to save the small amount of steam used to maintain the vacuum when running. The unfortunate man was not a trained driver, although he had on several occasions driven trains upon this line, and the difficulty he experienced in keeping up steam is precisely what might have been expected under the circumstances, for it is well known that the maintenance of steam is one of the duties in which a well-trained driver has the greatest possible advantage over an inexperienced one. It is stated that before starting down the incline from Glen-na-galt he blew up the vacuum to 17 ins., but there is no evidence to show what amount of steam he had upon the engine, and it is more than probable that he had not very much.

Although in some respects it can only be a matter of surmise, it is my belief that the driver started from the top of the incline at far too a high a rate of speed (and for this there may have been a reason to which I will refer presently,) that, when he endeavoured to check the speed of his train he found that, owing to the greasy state of the rails, the brakes were not taking effect so quickly as he expected, that he then began to try to blow up a more effective vacuum, which, owing partly to want of steam, and partly to the brake-pipes and connections being leaky, he was unable to obtain, and that after doing this two or three times, he lost all the brake power he had had, and was powerless to do more than keep his engine hand-brake hard on, as the sparks seen by the guard to be flying from the wheels of the engine, (but not, it should be noted, from the wheels of the other vehicles,) show that he did actually do. As a last resource, and having under the circumstances done everything in his power to avert the disaster, he evidently reversed his engine, although this would have had but little effect, and he and his fireman pluckily stuck to their engine doing their best to the last moment.

While therefore, the immediate cause of the accident was, as I have stated, excessive speed, I consider that the running away of the train to which the ultimate catastrophe must really be attributed, was due :—

1st. To the too rapid start made from the top of the incline.

2nd. To the train being in charge of a driver with insufficient experience in regard to the maintenance of steam, and the manipulation of the continuous-brakes.

3rd. To the very greasy state of the rails.

4th. (Probably.) To the brake connections being in a leaky condition.

A possible reason for the driver starting too quickly may be found in the fact that, owing to loss of time on the journey, he was nearly two hours late, and was anxious to get ahead as fast as possible out of the way of the regular train which left Dingle at 3.30 p.m., and had already left Aunascaul, and, if this be so, a heavy responsibility falls upon the Company, who, in contravention of an undertaking given by them to the Board of Trade, have been running trains not carrying a staff, and with tickets only, without having first established block-working, for if block-working had been in force, the 3.30 p.m. train would not have been allowed to leave Aunascaul until the preceding train had reached Castle Gregory junction, and the driver of the special train need not have been in any anxiety about it. As it was, a second and worse accident might have occurred, if the guard, Thomas O'Leary, had not been prompt in going or sending back to stop the 3.30 train, and if the driver of this train had not had it well under control.

Alfred T. Redshaw, the driver, was a young man of excellent character, who had been in the service of the Company in charge of the locomotive shops for about

7½ months, and had come with first rate testimonials, as a fitter, after 11 years' service with the Great Northern Railway Company (Ireland); but although Mr. Parkes, the manager of the Tralee and Dingle Railway Company, himself not a trained driver, gives it as his opinion that Redshaw was a competent driver, and he had several times acted in that capacity, the man had never been trained as a driver, and it does not appear that any steps whatever were taken to ascertain whether or not he was able to drive, but that his statement that he could do so was accepted as correct. Now it is the greatest possible mistake to suppose that because a man is a good locomotive fitter he can drive an engine, or that because a man can drive an engine under ordinary circumstances, he is as fit as a properly trained driver to cope with such difficulties as would appear to have arisen on this occasion, and I consider that it was most improper to have allowed this man to undertake the duty of driving, especially upon a line of such a character as the Tralee and Dingle Railway, without first ascertaining that he was a thoroughly competent driver.

Richard Dillon, the fireman, who had been only a month in the service, during which time he had been working regularly between Tralee and Dingle, had been properly trained on the Great Southern and Western Railway, and came with a recommendation from the district locomotive superintendent of that Company.

Bernard Loughlin, the permanent-way inspector, had been a year in the service of the Company, was well acquainted with the line, and had previously been for many years in the service of the Great Northern Railway (Ireland).

The daily hours of duty of these three men were from 7 a.m. to 7 p.m., with two hours off during the day.

In conclusion, although in my opinion it is perfectly safe to run round a properly laid 3-chain curve upon a 3-feet gauge, at a speed of five miles an hour, and although there should be no danger of a train exceeding this speed at Curraduff Viaduct, if due care be observed and the limit of speed when coming down the incline be strictly adhered to, yet, having in view the grave risk due to the position of this curve at the bottom of the steep incline, if from any cause a descending train should happen to get out of control, I consider that it is most desirable that, if by any possibility it can be managed, a deviation of the line in a southerly direction, which would improve both the gradients and the curves, should be made.

The difficulty in the way of this improvement being carried out, and indeed the difficulty in the way of providing the highly trained staff necessary upon a line of this description, of maintaining the rolling-stock in a proper condition both as regards quantity and state of repair, and of effecting other desirable improvements upon this cheaply-made line, is undoubtedly want of money.

The guaranteeing bodies are already heavily rated, the amount of rate due for the guaranteed interest on the capital of this railway, and the excess of the working expenses over the receipts, being, I am informed, 2*s.* 2*d.* in the pound, in one barony, while the costs of this accident, which must be very heavy, will fall upon the working expenses for the current half-year, and therefore on the cess payers in the guaranteeing area.

Under these circumstances it is difficult to see how the sum necessary to make any improvements in the direction which I have indicated, which are most desirable in the interest of the public, could be raised without some grant in aid.

I would strongly recommend the Company to have their engines carefully examined by an experienced locomotive engineer with the view of ascertaining whether they can be improved in such a way as to render them more capable than they appear to be, of taking a heavy train up the steep inclines, and, if nothing can be done, to limit the load to such a weight as the engines are able to cope with, employing assistant engines when the load exceeds that weight; and I would also recommend them to adopt a similar course in regard to the vacuum-brake, which does not appear to me to be in first-rate order, upon some of their stock at any rate, and to issue more definite instructions as to the method of working this brake, especially in regard to the amount of vacuum to be maintained, and to the continuous and constant use of the small ejector.

I have, &c.,
F. A. Marindin,
Major, R.E.

The Assistant Secretary,
Railway Department, Board of Trade.

I concur in the above Report.
Richard Adams, Q.C.

APPENDIX.

(A.)

List of Killed.

Alfred T. Redshaw, Richard Dillon, and Bernard Loughlin.

List of Injured.

Denis Power, Michael Power, John Power, Edward Murphy, Richard Dennehy, Thomas Riordan, John Talbot, senior, John Talbot, junior, John Sheehan, Eugene Slattery, ——— McMahon, William Hanrahan, and John Dillon.

(B.)

REPORT OF COUNTY SURVEYOR.

Tramways Act, 1860; 23 & 24 *Vict., cap.* 152, *Section* 5.

The Tralee and Dingle Light Railway or Tramway.

No. 1.—Length, 37 miles, 6 furlongs, 3 chains.
Cost, 120,000*l*., or per mile 3,176*l*.
To include cost of construction, preliminary charges, land, legal and other expenses, engines, carriages, waggons, &c.

Mr. Foreman and Gentlemen,

This tramway commences near the goods store of the Limerick and Kerry Railway, and terminates at a point 383 yards south of the stone pier at the south side of the entrance of the coastguard station at Dingle.

For two-thirds of the length it runs along the mail car road.

There are two curves of 3 chains, or 66 yards radius.

Forty-one public roads are to be crossed on a level.

The grades, one-third the length, have a grade of from 1 in 30 to 1 in 32, the remainder vary from 1 in 32 to horizontal.

Twenty-five bridges are to be crossed; these bridges are old and will require to be strengthened.

No. 2 commences at the termination of Tramway No. 1, as heretofore described, and terminates in the town of Dingle at a point nine yards in a northerly direction from the north-west corner of Dingle Pier.

It is 3 furlongs 3½ chains in length, half the length runs along the mail car road, and the remainder along the foreshore of Dingle Bay.

Castle Gregory Branch.

No. 3 tramway commences in the townland of Knockglassmore by a junction with Tramway No. 1, at a point in a field in the occupation of Patrick Fitzgerald, 550 yards, or thereabouts, in an easterly direction from the centre of the eastern pier of the entrance gate of Knockglassmore House, and terminates in a field of John Callaghan's townland of Martramane, parish of Killiney, barony of Corkaguiny, and county of Kerry, at a point 220 yards in a northerly direction from the centre of a bridge over the townland boundary of Martramane, Coolroe.

At starting it goes above the mail car road for two furlongs, then crosses it, after crossing Bunnow Bridge it runs along the road to Castle Gregory for 4½ miles.

The curves are fair. The grades are 1 in 32 for 2½ furlongs, the remainder vary up to 1 in 1,300. Ten public roads are to be crossed on a level, and six bridges.

No. 4 commences in a field in the occupation of the Great Southern and Western Railway, 80 yards eastward, parallell to the Great Southern and Western Railway line from the south-eastern end of the passenger platform of the said railway, and ending at a point in Tramway No. 1, in Rock Street, townland of Balloonagh, 70 yards south from the south pier of the level crossing gate of Limerick and Kerry Railway.

I have, &c.,
(Signed) W. H. Deane, C.E.,
County Surveyor, County Kerry.
Tralee, 5th July 1884.

(C.)

REPORT OF BOARD OF WORKS.

And whereas we have received a communication from the Lords of the Committee of Privy Council appointed for the consideration of matters relating to trade and foreign plantation, dated 9th July 1884, requiring that clauses should be inserted in any order which may be granted to the promoters of the said undertaking by his Excellency the Lord Lieutenant in Council to the following effect:—First, to provide for the protection of navigation; and second, to save the rights of the Crown in any tidal lands which may be interfered with by the proposed tramway works

And we hereby recommend in pursuance of section 41 of the said Act that clauses to the foregoing effect should be inserted in such order accordingly, and that a copy of the order when made should be forwarded to the said Lords of the Committee of Privy Council.

Given at the office of Public Works, Dublin, this 11th day of July 1884.

(Signed) R. H. Sankey,
W. R. Le Fanu,
Commissioners of Public
Works in Ireland.

The Tralee and Dingle Light Railway and Tramway.

Whereas we, the Commissioners of Public Works, did, in pursuance of section 9 of the Tramways (Ireland) Act, 1860, by Benjamin F. Fleming, Esq., civil engineer, appointed by us for such purpose, make public inquiry as directed by the provisions of the said Act, as amended by the Tramways (Ireland) Amendment Act, 1861.

And whereas the said B. F. Fleming duly made his report to us, dated 9th day of July 1884, which report is hereunto annexed.

Now we, in pursuance of the Acts herein-before mentioned, do report that as regards the merits of the undertaking in an engineering point of view, the proposed Tralee and Dingle Light Railway and Tramway can be efficiently constructed and worked in accordance with the plans and sections deposited with us.

And we do further report that the said undertaking should be modified and carried out in the manner suggested by the said report of the said B. F. Fleming, which report we incorporate herewith, and declare that same shall be read as portion hereof.

Tralee and Dingle Tramway.

I held a public inquiry into the engineering merits of the above undertaking at the Court House, Tralee, on the 23rd day of June last, and beg to submit the following to the Commissioners of Public Works as my report thereon:—

Mr. Huggard, solicitor, and Mr. Hickson, civil engineer, attended on the part of the promoters. There was no opposition.

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The undertaking consists of a tramway (chiefly on the public road) from the stations of the Great Southern and Western and the Limerick and Kerry Railways at Tralee to the pier at Dingle, with a branch of the town of Castle Gregory. It is divided into four tramways, Nos. 1, 2, 3, and 4.

The lengths being :—

——	On Roads.			Through Fields, &c.			Total.		
	M.	F.	C	M.	F.	C.	M.	F.	C.
Tramway, No. 1 -	26	4	8	4	1	3¾	30	6	1¾
„ No. 2 -	0	1	7½	0	1	7	0	3	4½
„ No. 3 -	4	2	7	1	6	4	6	1	1
„ No. 4 -	0	0	6	0	2	9¾	0	3	5¾
Total - -	31	1	8½	6	4	4½	37	6	3

Tramway No. 1 commences at the Tralee station of the Limerick and Kerry Railway, passes through the the town of Tralee, crosses the River Lee close to and at the east side of the bridge over it near Blennerville, passes through the village of Blennerville, and close to the villages of Anniscaul and Camp, and terminates a quarter of a mile from the town of Dingle in a field beside the public road leading from Dingle to Tralee in the townland of Farran and parish of Dingle.

Tramway No. 2 commences at the termination of Tramway No. 1, and is a continuation of it, passes close to the entrance gate to the revenue station, and along and near the edge of the strand, and terminates at the north end of Dingle Pier.

Tramway No. 3 commences by a junction with Tramway No. 1 in the townland of Knockglassmore, and parish of Kilgobban, at 9 miles 3 furlongs 2 chains on Tramway No. 1, and running principally upon the public road it terminates at the south end of the town of Castle Gregory.

Tramway No. 4 commences beside the Great Southern and Western Railway six chains to the east of the passenger station at Tralee, and terminates by a junction with Tramway No. 1, at 1 furlong 3 chains on that tramway.

The gauge proposed is three feet.

Tramway No. 1 :—
  The steepest gradient is 1 in 30.
  The ruling gradient is 1 in 30.
  The sharpest curve has a radius of 2½ chains.
Tramway No. 2 :—
  The steepest gradient is 1 in 41.
  The ruling gradient is 1 in 41.
  The sharpest curve has a radius of 9½ chains.
Tramway No. 3 :—
  The steepest gradient is 1 in 32.
  The ruling gradient is 1 in 32.
  The sharpest curve has a radius of 4½ chains.
Tramway No. 4 :—
  The steepest gradient is 1 in 66.
  The ruling gradient is 1 in 66.
  The sharpest curve has a radius of 2½ chains.

On Tramway No. 1 the gradients are favourable from the commencement to 9 miles 4 furlongs 5 chains, but at this point begins a long ascent to summit at 18 miles 1 furlong 1 chain, the gradients being as follows :—

	M.	F.	C.
Rising 1 in 38 for - -	0	4	0
Level „ - -	0	0	7
Rising 1 in 30 „ - -	0	2	3
Level „ - -	0	0	3
Rising 1 in 30 „ - -	1	0	1
Rising 1 in 31 „ - -	1	5	2
Total length -	3	4	6

On this incline the line is fairly straight with the following four exceptions :—On the 1 in 38 (in the middle of it), there is a curve of seven chains radius for a length of five chains, on the first level portion there is a curve of three chains radius for its whole length, on the second 1 in 30 (2½ furlongs from the top of it), there are two curves reversing of four chains and five chains radius respectively, for a length of six chains, and on the 1 in 31, three furlongs from the bottom of it, there is a curve of five chains radius for a length of one furlong.

At the summit there is a level portion for a length of five chains, and then a gradident of 1 in 30 falling towards Dingle for a length of one mile; on this incline the line is tolerably straight with one exception, there being a curve of nine chains radius near the top of it for a length of 4½ chains; on the remaining portion of this Tramway (No. 1) there are three other inclines falling towards Dingle, viz., at 17½ miles of 1 in 34 for a length of a mile; at 19 miles of 1 in 30, 1 in 31, 1 in 32 and 1 in 41 for a total length of 1 mile 7 furlongs 8 chains, the 1 in 30 (10 chains long) being at the top of this incline, and at 25¼ miles of 1 in 30 for a length of 1 mile 1 furlong; on the last of these inclines (1 in 30) there is a short curve of nine chains radius; on the other two inclines there is no bad curve.

Generally where the tramway runs along and upon the public road, it is intended to form it upon a raised path (like a footpath) along the side of it, but where it passes through streets or villages, it is intended that the upper surface of the rails shall be on the level of the surface of the road

Where the tramway shall be upon the public road or streets, and the upper surface of the rails on the level of the surface thereof, it is proposed that the spaces between rails and sleepers shall be filled with ordinary macadam well grouted and rolled, the flange of the wheels forming their own groove.

The rails proposed to be used are intended to be steel, Vignoles pattern, weighing 40 lbs. to the yard, fished at the joints with steel fish-plates, to be secured to sleepers by dog-spikes and fang-bolts at joints and intermediate places.

The sleepers are proposed to be of timber, 9 inches by 4 inches and 6 feet long, laid 2 feet 10 inches apart, except at joints, where they are intended to be 1 foot 6 inches apart on a bed of ballast, the lower 6 inches of which is intended to be pitched.

Where the tramway shall be upon a raised path at the side of the road, it is proposed that a channel course shall be formed at the road side of the tramway connecting with built gully-traps and drain pipes laid underneath the tramway connecting with roadside ditches.

It is proposed to have passing places at intervals of about one every three miles, the additional line required for these and for sidings will be laid generally upon land to be acquired for the purpose.

It is proposed to have eight stations, viz. :—

	M.	F.	C.
Tralee—			
Blennerville, at - - -	2	2	0
Junction of Tramway No. 3 -	9	3	0
Camp, at - - -	10	4	0
Aunnascaul, at - - -	19	4	5
Lispole, at - - - -	26	0	0
Dingle—			
Castle Gregory—			

Locomotives proposed to have two pair of wheels (coupled). Wheel base, six feet; weight not to exceed eight tons on a pair of wheels. Passenger carriages to be constructed on bogie frames, and to have inside longitudinal seats; weight about five tons. Cattle trucks to be capable of carrying eight to ten cattle; goods waggons to weigh about two tons.

It is proposed to make use of 33 public road bridges and culverts (varying in span from 4 feet to 31 feet), either wholly or partially (some of them having to be widened from 8 feet to 9 feet). All of these bridges with the exception of one (at 3 miles 3 furlongs 8 chains on Tramway No. 1) appear sufficiently strong for the tramway traffic. I recommend that if, in the opinion of the county surveyor, any bridge, culvert, or drain proposed to be used for the tramway shall be insufficient in strength, width, or otherwise for the tramway traffic, such works shall be executed in connection therewith as he may require.

I recommend the following modifications to be carried out in construction of these tramways:—

That where the tramway is upon the road, and the uppermost surface of the rails on the level of the surface of the road, the rail to be used shall be a grooved rail, and that the surface of the road shall be finished with such paving or metalling as the county surveyor may require.

That where a grooved rail is used it shall be laid upon longitudinal timber sleepers, or upon a bed of cement concrete 12 inches deep, below the surface of the road, and that the rails shall be kept in gauge with three wrought iron tie-bars in each rail, in straight lines as well as in curves.

That where the Vignoles rail is used the sleepers shall be not more than 2 feet 6 inches apart (centres), and that they shall be boxed up to their upper surface in the spaces between, and also for a width of at least 12 inches outside their ends.

That where the tramway shall be on a raised path on the side of the road there shall be such kerbing, pitched slope, or walling, as the county surveyor may require, between the tramway and the roadway. Where curbing is used its height shall not exceed 8 inches above the surface of the road. That the clear width between the fence at the field side of the tramway and the rail next to it, and between the outer edge of the curbing and the rail next to it, shall be such as the county surveyor may require, and that the drainage of the roads shall be provided for by such drains, under and parallel to the tramway as the county surveyor may require.

That the Vignoles rail shall weigh not less than 45 lbs. to the yard, and the grooved rail not less than 56 lbs. to the yard.

I recommend that all works upon or in connection with any public road be carried out to the satisfaction of the county surveyor.

I recommed that special and ample brake power shall be provided and always ready for use on the heavy inclines.

With reference to the general engineering merits of the undertaking, I am of opinion that, having regard to the object of uniting Dingle and Castle Gregory with Tralee by means of a road tramway, that object could not be better attained than by the route the proposed tramway take.

The country is mountainous, and although there are long heavy inclines I am of opinion that with powerful engines and an assistant engine for heavy loads on those inclines, the proposed tramway may be efficiently worked.

The accompanying tracings were supplied by Mr. J. H. Ryan, C.E.

(Signed) BENJAMIN F. FLEMING,
35, Dawson Street, Dublin,
9th July 1884.

(D.)

REGULATION OF RAILWAYS ACT, 1842.

5 & 6 Vict. c. 55.

Opening of railways. Repeal of 3 & 4 Vict. c. 97, ss. 1 and 2.

3. And whereas by the said recited Act it is enacted that after two months from the passing of the said recited Act no railway or portion of any railway shall be opened for the public conveyance of passengers or goods until one calendar month after notice in writing of the intention of opening the same shall have been given by the Company to whom such railway shall belong to the Lords of the Committee of her Majesty's Privy Council appointed for trade and foreign plantations; and whereas by the said recited Act it is also enacted that if any railway, or portion of any railway, shall be opened without due notice as aforesaid, the Company to whom such railway shall belong, shall forfeit to Her Majesty the sum of twenty pounds for every day during which the same shall continue open, until the expiration of one calendar month after the company shall have given the like notice as is hereinbefore required before the opening of the railway, and any such penalty may be recovered in any of Her Majesty's courts of record; be it enacted, That the said recited provisions of the said Act shall be and they are hereby repealed.

Notice of intended opening to be given to Board of Trade. [Extended by 34 & 35 Vict. c. 78. s. 5.]

4. And be it enacted, That no railway, or portion of any railway, shall be opened for the public conveyance of passengers until one calendar month after notice in writing of the intention of opening the same shall have been given by the company to whom such railway shall belong to the Lords of the Committee of Her Majesty's Privy Council appointed for trade and foreign plantations, and until ten days after notice in writing shall have been given by the said company to the Lords of the said Committee of the time when the said railway, or portion of railway, will be, in their opinion, sufficiently completed for the safe conveyance of passengers, and ready for inspection.

Penalty for opening without notice. [Extended by 34 & 35 Vict. c. 78. s. 5.]

5. And be it enacted, that if any railway or portion of any railway shall be opened without such notice as aforesaid, the company to whom such railway shall belong shall forfeit to Her Majesty the sum of twenty pounds for every day during which the same shall continue open until the said notices shall have been duly given and shall have expired; and every such penalty may be recovered in any of Her Majesty's courts of record, or in the court of session, or in any of the sheriffs' courts in Scotland.

Board of Trade may postpone the opening if inspector report that the same would be attended with danger. [Extended by 34 & 35 Vict. c. 78. s. 5.] [Amended by 36 & 37 Vict. c. 76. s. 6.]

6. And be it enacted, that if the officer or officers appointed by the Lords of the said Committee to inspect any such railway or portion of railway shall, after inspection thereof, report in writing to the Lords of the said Committee that in his or their opinion the opening of the same would be attended with danger to the public using the same by reason of the incompleteness of the works or permanent-way, or the insufficiency of the establishment for working such railway, together with the grounds of such opinion, it shall be lawful for the Lords of the said Committee, and so from time to time as often as such officers shall, after further inspection thereof, so report, to order and direct the company to whom such railway shall belong to postpone such opening for any period not exceeding one calendar month at any one time until it shall appear to the Lords of the said Committee that such opening may take place without danger to the public; and if any such railway or any portion thereof shall be opened contrary to any such order and direction of the Lords of the said Committee, the company to whom such railway shall belong shall forfeit to Her Majesty the sum of twenty pounds for every day during which the same shall continue open contrary to such order and direction, and any such penalty may be recovered in any of Her Majesty's courts of record, or in the court of session or in any of the sheriffs' courts in Scotland: Provided always, that no such order as aforesaid shall be binding upon any railway company unless therewith shall be delivered to the said company a copy of the report of the officer or officers on which such order shall be founded.

Proviso.

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BOARD OF TRADE INQUIRY INTO THE ACCIDENT AT CAMP ON MAY 22, 1893,

HELD IN

TRALEE COURT HOUSE ON JUNE 7TH, 8TH, 9TH, AND 10TH, 1893,

BY

MAJOR FRANCIS ARTHUR MARINDIN, R.E., C.M.G.,

WITH

RICHARD ADAMS, ESQ., Q.C., LEGAL ASSESSOR.

The inquiry opened at Tralee Court House on Wednesday, June 7th, 1893, at 11 o'clock.

(*Major Marindin.*) In opening this inquiry I will read the terms of the appointment made by the Board of Trade for this purpose:

"Whereas by the Regulation of Railways Act, 1871, it is provided that the Board of Trade may direct an inquiry to be made by an inspector into the cause of any accident, of which notice is, for the time being, required by, or in pursuance of the said Act, to be sent to the Board of Trade, and where it appears to the Board of Trade, either before or after the commencement of any such inquiry, that a more formal investigation of the accident, and of the causes thereof, and of the circumstances attending the same, is expedient, the Board of Trade may, by order, direct such investigation to be held: And whereas it is by the same Act further provided that the Board of Trade may appoint any person or persons possessing legal or special knowledge to assist an inspector in holding the same: Now, therefore, the Board of Trade, in pursuance of the powers conferred on them by the said recited Act, do hereby direct a formal investigation to be held into the causes of, and circumstances attending an accident which took place at Camp, on the Tralee and Dingle Light Railway and Tramway, on the 22nd instant; and further, in pursuance of the powers conferred on them by the said recited Act, do hereby appoint Major Francis Arthur Marindin, R.E., C.M.G., as inspector to hold the said investigation, and Richard Adams, Q.C., to assist the said inspector in holding the same. Given under my hand this 29th day of May 1883.

(Signed) COURTENAY BOYLE,
Secretary to the Board of Trade."

Mr. Adams and I, after a discussion as to the best mode of procedure to adopt in order to enable us to arrive at a conclusion as to the cause of this lamentable accident, have decided that we ourselves will call and examine witnesses, servants of the Company, and others, who are in a position to give us information, or to produce such documents as we may require, and that those witnesses will be subject to cross-examination, within due limits, by those representing parties whom Mr. Adams, as my legal assessor, may consider to have a right to put in an appearance at this inquiry. We will then be glad to hear any further evidence relative to the subject under investigation, that is to say, the cause or causes of the accident, which may be offered, either by individuals or by the parties represented before us; but we limit the evidence strictly to the matter referred to us in the appointment of the Board of Trade. I need say no more at present, except to express—speaking for Mr. Adams as well as myself—our sympathy with the families of the unfortunate men who lost their lives, and our satisfaction at hearing that the poor people who are injured are progressing favourably towards recovery; we hope they may eventually recover. We think it would be better for us before hearing any evidence at all to view the site of the accident, and we shall have then the whole matter before us and the surroundings of the place. And, therefore, after taking down the names of the gentlemen who appear representing different parties, we will adjourn this Court, and will drive out to the place, and we hope that we may be back at about 3 o'clock and resume the proceedings, perhaps we may be a little later. I should now like to hear the names of those who wish to appear.

(*Mr. Adams.*) Who is for the Company?

(*Mr. Thomas Huggard, Solicitor.*) I appear for the Company.

(*Mr. Adams.*) Of course the Company have a *locus standi.*

(*Mr. T. Harrington, B.L., M.P.*) I appear for the Tralee Town Commissioners, instructed by Mr. Murphy.

(*Mr. Adams.*) Is Tralee included in the guaranteeing area?

(*Mr. Harrington.*) Yes, sir.

(*Mr. Adams.*) Then I consider you have a *locus standi.* Is it the town of Tralee that is guaranteeing?

(*Mr. Harrington.*) The town of Tralee, the Commissioners as sanitary authority, are guaranteeing 6,000*l.*

(*Mr. Adams.*) Interest on that and working expenses.

(*Mr. B. O'Connor Horgan, Solicitor.*) I represent Thomas O'Leary, the guard, and the two Messrs. Murphy, of Cork, jobbers.

(*Mr. Adams.*) People injured?

(*Mr. Horgan.*) Yes, sir.

(*Mr. Huggard.*) I was asked to state that Mr. Charles Morphy, of Tralee, has been instructed to appear for several ratepayers interested in the barony, Lord Ventry, Mr. Hussey, Mr. John McGillicuddy, and others. He is in Killarney at present, but expects to be back by 4 o'clock. He also appears for the representatives of Redshaw, the engineer, who was killed.

(*Mr. Daniel G. O'Reardon, Solicitor.*). I appear for Eugene Slattery and John Power, two of the men injured.

(*Mr. Harrington.*) Before you adjourn, sir, I intend in the course of the inquiry to make an application, and I think I should make the application to you now at an early period. I do not know whether you have the plans and specifications of the line?

(*Major Marindin.*) I have the plans that were sent to the Board of Trade before the inspection of the line, which purported to be, and, no doubt, are copies of the Parliamentary plans, the deposited plans; but we are going to call upon some officer of the Company to produce the original, or copies of the original plans approved.

(*Mr. Adams.*) I believe the deposited plans are in the clerk of the peace's office, and I have intimated to the clerk of the peace to be ready to produce them at any moment; is not that so?

(*Mr. Huggard.*) That is so.

(*Major Marindin.*) We will now adjourn, and drive out and take a view of the place, and I hope we will back here and able to commence the inquiry at 3 o'clock or soon after.

The inquiry was adjourned, and at a quarter to 4 o'clock was resumed.

William Henry McCowen sworn.

1. (*Mr. Adams.*) Are you the secretary of the Tralee and Dingle Light Railway?—Yes.

2. Have you the Order in Council?—Yes (*produced*); this is the only copy I have.

3. What is the date of the Order in Council?—17th September 1888.

4. Was the scheme opposed before the Privy Council?—No.

5. And that order has the force of an Act of Parliament?—Yes, this does away with the Act of Parliament.

6. Are there plans and specifications referred to in that?—Not in this, but in the specification the plans are referred to.

7. Plans and sections?—Yes.

8. Are those plans and sections deposited with the clerk of the peace?—Yes.

9. And those we can have, I suppose?—Yes, sir.

10. Have you examined those plans and sections yourself?—No; Mr. Hickson, the engineer, examined them.

11. This being a scheme under the Tramway Acts, of course it was originally passed by the Kerry Grand Jury?—Yes.

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12. At what assizes, do you remember?

(*Mr. Huggard.*) July 1884.

13. (*Mr. Adams.*) The plans and sections were deposited, I presume, with their secretary, according to law, before they passed this scheme?—Oh, certainly.

14. And they had before them, I presume, as the statute requires a report from the Board of Works on the scheme?—Yes.

15. Is that report forthcoming?—We have a copy of it; of course the original had to be sent to the Privy Council.

(*Mr. Huggard.*) The original is lodged with the Privy Council pursuant to the orders under the Tramway Act, and we give you a copy of it.

(*Mr. Adams.*) Have you a certified copy of it?

(*Mr. Huggard.*) No.

(*Mr. Adams.*) What was the copy taken from?

(*Mr. Huggard.*) It was for our own use, from the copy furnished by the Board of Works, which copy had to be transmitted to the Privy Council; it is a copy made in my office from the copy given by the Board of Works

(*Mr. Adams.*) Have you the copy from the Board of Works?

(*Mr. Huggard.*) No, that is deposited with the Privy Council.

(*Mr. Adams.*) Hand in the copy made in your office, and we will afterwards, if necessary, have it compared with the original.

16. (*To witness.*) Was there also a report on this line from the county surveyor?

(*Mr. Huggard.*) Yes, sir; we have that here too.

(*Mr. Adams.*) Who was the county surveyor then, was it the present gentleman?

(*Mr. Huggard.*) I think not. It was a Mr. Hackett who was here at that time.*

17. (*Mr. Adams.*) As I understand, the grand jury when they passed this line had before them the deposited —or, at least, they had before them, if they thought proper to see them—the deposited plans and sections; is not that so?—Yes

18. They had also before them the report of the Board of Works' engineer?—Yes.

19. They had also before them the report of their own county surveyor?—Yes.

20 The grand jury having passed the presentment, I presume the case went in due form of law before the Privy Council?—Yes.

21. There was a public hearing before the Privy Council?—There was a public hearing, but no person opposed.

22. Nevertheless there was a public hearing, but the scheme was unopposed?—Yes.

23. And was then passed by the Committee of the Privy Council, and subsequently finally adopted by the Lord-Lieutenant in Council under the Order you have put in?—Yes.

24. It is a guaranteed line?—Yes.

25. Could you state what the guarantees are, how they are distributed?—The guarantee is on 120,000*l.* of the capital.

26. Is that the entire capital of the line?—150,000*l.* is the entire capital; there are 30,000*l.* ordinary shares.

27. Has that 150,000*l.* capital been entirely expended?—Yes.

28. Then 120,000*l.* of that is guaranteed?—Yes.

29. Would you state by what baronies?—Corkaguiney guarantees 60,000*l.*, Clanmaurice 15,000*l.*, Truaghanackmy 39,000*l.*, and the sanitary district of Tralee 6,000*l.*

30. What is the per-centage?—4 per cent.; the Treasury pays half the 4 per cent., it recoups the baronies 2 per cent.

31. Of course the baronies are in the usual way liable for the working expenses of the line in addition to the guarantee?—Yes.

32. Now does the line pay its working expenses?—No, it has not paid its working expenses.

33. What is the total guaranteed interest?—4,800*l.* per annum.

34. What was the deficit in working expenses last year?—The last half year 1,300*l.*, and the half year before was about the same.

35. So, as I understand, at present the baronies are liable to find the 2,400*l.* a year, that is to say, 2 per cent. of the 4 per cent., and about 2,600*l.*, the deficit of the working expenses?—Yes, sir.

36. Do you know what is the taxation on the baronies?—I could not tell you what the taxation is.

37. Now you have already stated that the entire capital of the company has been expended. I suppose that was provided for by the scheme; that there was not—there generally is not—any surplus left for any purpose?—No.

38. That is to say, the capital was fixed at the exact sum which the line would cost?—The capital was fixed, and then the difficulty was to get a contractor to take it up. A contractor at last took it up, and he was handed the scrip for the entire amount.

39. It was a contractor's line, like many of these light railways; he made the line, and got the entire scrip?—Yes.

40. It is important to know that there is no fund, as far as I can see, for structural alterations or anything of that kind?—None whatever.

41. (*Major Marindin.*) Have you anything to do with the working regulations of the line?—No, I have nothing to do with the working.

42. You do not know anything about the regulations that were issued after the line was opened as to the working, the limits of speed, and so on?—Oh, yes.

43. Have you got a copy of those?—These are printed off the Board of Trade copy (*produced*).

44. These are regulations for the working of the line; were these issued to the people who had the working of the line?—These are put up in all the vehicles.

45. Will you look at them, please; under these orders there were limits of speed at certain points on the line, were there not?—Yes.

46. Would you read No. 5?—"The speed at which
" such engines and carriages shall be driven or pro-
" pelled along the light railway, where it is laid along
" the side of the road, shall not exceed the rate of
" 12 miles an hour; and through any town or village
" the rate of 6 miles an hour; and elsewhere, where
" the light railway is laid at a greater distance than
" 30 feet from the centre of any public road, the rate
" of 25 miles an hour; and the speed at which such
" engines and carriages shall pass through facing
" points shall not exceed the rate of 4 miles an hour,
" except in the case of those facing points which are
" properly interlocked with signals or the engine staff."

47. Then would you read No. 8, please?—"The
" speed of the engines and carriages shall not exceed
" the rate of 2 miles an hour at the following places:—
" (1.) In crossing Edward Street and Nelson Street,
" Tralee. (2.) In crossing the road close to Blenner-
" ville Station. (3.) In crossing the road at about
" 17¾ miles from Tralee. Nor 5 miles an hour at
" the following places:—(1.) At the oblique crossings
" of all roads when approached on the level or on a
" falling gradient. (2.) On the sharp curves on each
" side of the viaduct at 10 miles 58 chains on the
" journeys from Dingle to Tralee."

48. Is that the viaduct where the accident happened?—Yes

49. Do you know whether those regulations were issued to the drivers and others who work the line?—They are issued in another form to the drivers.

50. Will you put that in?—This (*produced*) is the working time-table.

51. Can you give me anything to show that this was in the hands of all your drivers; have you their receipt for it?—We have not a receipt, but the manager gives it to all the drivers personally; we will have him up.

52. Then as to the construction of the line, you

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* This is an error; the county surveyor at that time was Mr. Deane.—F.A.M.

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would leave that to the engineer to speak about?—Yes.

53. (*Mr. Harrington.*) To whom were those instructions issued; was it a portion of your duty to issue them to the men in the employment of the company?—No, the manager's.

(*Major Marindin.*) I think, Mr. Harrington, he said he would have the manager up, and he would speak as to whether the regulations were delivered to these men.

54. (*Mr. Horgan.*) Who appointed Redshaw?—The Board of Directors.

55. Who constituted the Board of Directors at the time?—There were nine directors; you wish for the names?

56. Better, I think—Colonel Rowan, chairman.

57. (*Mr. Adams.*) Were those directors when Mr. Redshaw was appointed?—Oh, no.

58 (*Mr. Horgan.*) Only the directors who appointed Redshaw?—I have not the minute book in court.

59. You better have that. Redshaw was not an engine-driver. Before Redshaw was appointed you had a very good man named Graves, I believe?—Well, I cannot answer that question.

60. He gave satisfaction, did he not?—No, he did not.

61. Was he a regular engine-driver?—He was an engine-driver before he came to the company.

62. Redshaw was not an engine-driver?—Well, I do not know; I had nothing to do with that.

63. I am only asking you from your knowledge?—I have no knowledge.

64. Where was Graves an engine-driver before he came here?—On the Kanturk and Newmarket line.

65. And I take it that before he was appointed by you he must have got good letters of recommendation from the Kanturk and Newmarket line?—He had recommendations from Mr. Worthington.

66. Now he was dismissed at any rate?—Yes.

67. How long was he on your line?—I think about 18 months.

68. During that time you had nothing to complain of so far as accidents?—No.

69. Now he was dismissed, unfortunately?—Yes.

70. By whom now on your oath?—The directors.

71. Upon your oath was it not by the manager, Mr. Parkes?—No.

72. Was it not at his instance?—No, it was not.

73. Do you know who the directors were who had him dismissed?

(*Mr. Adams.*) Now, I beg your pardon, this is an entirely different thing from an inquiry about Mr. Redshaw, Graves was not there at the time, and it is not fair to the man himself to go into this. If you have any evidence to offer either by cross-examination or direct examination, as to the competency of the man who drove the engine, in my opinion that would be entirely relevant.

74. (*Mr. Horgan.*) Very well, sir. At any rate Redshaw was not an engine-driver at all?—I cannot say that.

75. Was he in the habit at all of driving engines?

76. (*Mr. Adams.*) Do you know anything about him?—No.

77. (*Mr. Horgan.*) Is there any officer of the company who appointed him?—He was appointed by the directors.

78. Was it on the recommendation of the manager?—No, he had a recommendation from the Great Northern Company of Ireland.

79. Is there a director who can tell us why they appointed him?—Yes.

(*Mr. Adams.*) Then there is no use in asking further.

80. (*Mr. Horgan.*) The nine directors by whom were they appointed?—Six by the shareholders and three by the baronies.

81. Who were the shareholders; have you a list of them here?—I have not the list in court.

(*Major Marindin.*) We are getting a little beyond I think, an inquiry into the causes of this accident.

(*Mr. Horgan*). I am quite satisfied to keep within any limit you put on me.

(*Mr. Adams.*) What we are here for is to inquire into the cause of the accident at Camp, if there is any complaint about the formation of the company or the constitution of the directors that may be the subject of another inquiry. But you are at the fullest liberty to ask anything bearing on the accident at Camp, and the matter you were on first, the appointment of this man and his competency, I think you are fully at liberty to go into.

82. (*Mr. Horgan.*) Now I see that you have got that minute book?—Yes.

83. Who were the directors that appointed Redshaw?—Colonel Rowan, Mr. Arthur Blennerhasset, Mr. Michael McMahon, Mr. David Watson, and Mr. George Collier.

84. Neither of these had any experience whatever of railway business of any sort, am I right in saying it, except Colonel Rowan?—I cannot say that.

(*Mr. Horgan.*) It is a matter of public notoriety.

(*Major Marindin.*) We cannot have public notoriety, you must put your questions to the witness, please.

85. (*Mr. Horgan.*) As far as your knowledge goes, had any of them any experience of railway business?—Only since they came on this board.

86. On whose recommendation was Redshaw appointed?—I think it was on the recommendation of the Great Northern Railway of Ireland.

87. You have not the recommendation or a copy of it?—I think Mr. Parkes has

(*Mr. Horgan.*) I will ask for that.

(*Major Marindin.*) Can you put that in Colonel Rowan?

(*Colonel Rowan.*) No, Mr. Parkes, the manager, will.

(*Major Marindin.*) When he is called we will ask him for it.

88. (*Mr. Horgan.*) How long was Mr. Redshaw before his decease engaged as an officer of the line?—Since October last.

89. During that time were there any complaints of him?—I never heard any.

90. It was only on occasion that he would drive the engine?—Oh, yes, only occasionally.

91. And I believe the reason he drove the engine on this day was because there was nobody else to do it?—The spare driver was ill.

92. And if you had a proper engine-driver you certainly would not have employed Redshaw?—I daresay that is so.

(*Major Marindin.*) I think we better wait for the manager; is it not the secretary's duty, as I understand, to interfere with the management and working of the line, that is in the hands of the manager and engineer of the line. I think you had better leave that subject.

93. (*Mr. Horgan.*) Now this gradient at Camp, I believe it is the largest gradient in the United Kingdom.

(*Major Marindin.*) I think, please, leave that to the engineer, it is a matter that does not affect the secretary.

94. (*Mr. Horgan.*) How much have you paid altogether, since the line was opened, for accidents on the line, killing cattle and otherwise?—I could not tell you without referring to the books.

95. Am I right in saying that the assizes and sessions since the line opened were largely taken up by processes and litigation of that sort?

(*Mr. Adams.*) You know we are only inquiring into the Camp accident, all those are matters of local history.

96. (*Mr. Horgan.*) Now, I believe, you have O'Leary on the line since it opened as guard?—Yes.

97. And you had no reason to complain of him whatever?—Not that I know of.

98. (*Mr. Adams.*) I beg you pardon for a moment. Mr. McCowen, what was your function in this

company, did you do anything but keep the books and do clerical work ?—The accounts and the clerical work, and the money part; I had nothing to do with the management.

(*Mr. Adams.*) Now all these question. I do not mean to say they are irrelevant, but such questions as to the gradients and the driver should be kept for the proper person.

(*Mr. Horgan.*) Very well, sir, I am perfectly in your hands, anything you suggest to me.

99. (*Mr. Harrington.*) I am not sure whether you took down the figures exactly as to the losses for the year ?—It would be about 2,600*l.*

Mr. S. Huggard, Clerk of the Peace, produced the deposited plans.

Richard Atkins Parkes sworn.

100. (*Major Marindin.*) You are the manager of the line ?—Yes, sir.

101. How long have you been manager ?—Since the August previous to the opening.

102. You are responsible for the working of the line ?—In so far as the traffic department goes.

103. Can you tell me who was in charge of the locomotive department ?—The late Mr. Redshaw.

104. What was he ?—He was locomotive foreman, and emergency engine-driver.

105. Was he a fitter ?—Yes.

106. Where did he come from ?—He came to us from Dundalk, the Great Northern Railway.

107. Do you know whether he was a passed driver ? —I understood from him that he was in the habit of driving where he came from, but when he came to me he showed a thorough knowledge of engine driving.

108. That is from your own experience ?—Yes.

109. But do you know whether he was a passed driver of the Great Northern Company ?—I do not.

110 Do you know that he was not ?—I do not know that he was not.

111. You do not know anything about it ?—I know that I asked him when he came to us, because our directors appointed him as emergency engine-driver, I asked him what his experience of driving was, he said that he had driven engines, but not from station to station, but about their premises repeatedly for a number of years.

112. Have you been on any other railway but this ?—Oh, yes.

113. Do you know that there are drivers who are passed as drivers ?—Not necessarily.

114. Not always ?—Not always.

115. And you do not know whether Redshaw was passed or not ?—I cannot say.

116. Do you know whether he had ever served as fireman ?—I cannot say.

117. Did you take any steps to find out ?—No.

118. So that Redshaw was an emergency driver used occasionally. How often had he driven between Dingle and Tralee ?—He had driven to my knowledge three times, I mean to say officially.

119. And do you know whether he was in possession of the regulations with regard to the speed of the trains, and so on, in different parts of the line ?—Yes.

120. How do you know ?—I supplied them to him myself.

121. I need hardly ask you was he a man that you were satisfied with in his character ?—Perfectly satisfied. I had the best testimonials from his previous employment.

122. As a driver or as a fitter ?—As a fitter.

123. (*Mr. Adams.*) Have you got those ?—No; Mr. Morphy had them last time.

(*Mr. Huggard.*) They will be forthcoming, sir.

124. (*Major Marindin.*) How long had he been in the service ?—Since last October.

125. As to the fireman he also was killed, I understand ?—He was.

126. What was his name ?—Richard Dillon. Well, regarding Mr. Redshaw, I say that he had driven from Dingle to Tralee three times, but he had driven about 27 times to the lower portion of the line to Castlegregory, and he had been with myself, I should say, nearly 30 times over the system, during which he was not actually in charge of the engine but used to drive, and I have seen him use the automatic vacuum brake, and he understood it thoroughly also, because he used to keep the same in order himself.

127. Are you a driver yourself, are you competent to drive an engine yourself ?—I think so.

128. Now as to the fireman, Dillon, how long had he been in the service ?—Not much more than a month; he was recommended by the district locomotive superintendent of the Great Southern and Western Railway at Cork, Mr. Smith.

129. Do you know whether he was a passed fireman on that system ?—No; he was a steam raiser and occasional fireman.

130. Had he passed for a fireman, do you know ? —I do not know what you mean by "passed for a fireman;" do you mean passed an examination; he was perfectly competent to fire on any railway.

131. How do you know ?—I have Mr. Smith's word for it.

132. Mr. Smith told you so ?—Yes.

133. Had you a personal interview with Mr. Smith, or was it by letter ?—A personal interview with him.

134. Was he also acquainted with the working of the vacuum brake ?—He was.

135. What is the rule on your line as to the amount of vacuum they must maintain ?—The rule is that they are not to start with less than 18 inches.

136. What is your rule as to keeping your vacuum up, that is, the use of your small ejector ?—That if the small ejector is not sufficient to keep the vacuum up they use the large ejector.

137. That is not answering my question, what is your rule as regards the constant use of the small ejector ?—There is no rule.

138. Is it in accordance with your rules to run with your small ejector shut off ?—Oh, no, that is directly against rule. Our rule is we keep the vacuum handle in running position, by which means the small ejector is continually working, and it is directly against the rule.

139. That is what I want to get at; can you quote your rule which forbids the running with the small ejector shut off ?—Well, I had no rule actually to that point, but it is a well-known fact you might as well make a rule for all the working parts of the engine as for that particular part.

140. Oh, dear no ! Not at all ?—The only rule I had with regard to the vacuum brake was that before starting the guard must see that his register is 18 inches at least, and I have never before known an instance of a driver attempting to run with his vacuum shut off his train.

141. You have no actual rule in your rules book forbidding a driver to run with his small ejector shut off ?—No.

142. You know what the effect of running with his small ejector shut off would be ?—I do.

143. What would be the result ?—If you shut off the small ejector, provided you have a vacuum previously, your brake goes on even if it gets exhausted.

144. You are quite wrong; that is what it does not do ?—Do you mean if you shut steam off from the small ejector you have no vacuum at all ?

145. Is it not a fact that if you leave your small ejector shut off for a certain time that your brake power leaks away, and you are left with your brake dead ?—Quite so.

146. If you cut off the whole of the vacuum suddenly by the breaking of the coupling or opening a

valve either in the guard's van or on the engine your brake would go on, but if you let it leak itself gradually away you are dead?—Quite so.

147. That depends of course upon the state of your couplings and connexions all through?—Yes.

148. If they are tight it will take a longer time to leak off, and if they are slack it will leak off quicker?—Oh, of course.

149. How long would it take for a brake to become inoperative?—With the brake they had that day, if he had the proper pressure of steam before starting down the hill, and 18 inches were registered, I should say that that brake should have blocked his wheels and kept on for more than hour.

150. That is not my question. Can you tell me how long it would take for a brake to become absolutely useless if you did not keep the small ejector running? We will take it that a man is running up a hill and suddenly leaves the small ejector shut off, can you tell me how long it would take before the whole of his stored-up energy would leak away?—It would depend on the amount of your leakage and the length of your train; I could not tell you exactly, but with the train that he had I should say that the brake should not have gone off within an hour.

151. Oh! You think within an hour, very well. Do you know, as a matter of fact, whether it was a habit at all on your line for the small ejector to be shut off when the train was running?—It is a matter that never came within my observation, nor would not be permitted for a moment if it had.

152. (*Mr. Huggard.*) How many years were you in the employment of the Great Southern and Western Railway before you came to the Dingle Company?—I was over 25.

153. Did you, during that time, sometimes have to drive engines yourself?—Not officially, but I have very often driven engines on the Great Southern.

154. Did you during the strike act as engine-driver?—I did at one time.

155. Do you know whether Redshaw served any apprenticeship as a locomotive engineer or foreman under the Great Northern Railway Company?—Yes; he served five years as well as I understand.

(*Major Marindin.*) That is as a fitter.

156. (*Mr. Huggard.*) As a fitter and locomotive operator generally. Now on the Great Southern system, during the time that you knew it, was there any rule, or practice, or custom that men had to pass an examination for the position of driver?—None whatsoever, except their general competency was observed.

157. What was the practice as to the training up of a man before he became driver?—Well, the cleaner boys in the shed after a certain time were made steam raisers, and later on made firemen, and those when they showed competency would be made drivers.

158. They began by being steam raisers, then firemen, and then drivers?—Yes.

159. There was no examination at all?—No; I do not think so.

160. And, so far as you observed, was Redshaw about 50 times altogether over that line driving, not officially, I mean?—I should say he was more than 50 times driving over the line, not officially, but on the engine with the drivers.

161. Would you say he was a very competent driver?—I would say he was a most competent driver.

162. Have you seen the wheels of the engine since the accident?—Yes.

163. Is there a sign on it of what they call skidding?—Yes.

164. That is running on the rails withot revolving?—Quite so.

165. Would you judge from that that the vacuum did, as a matter of fact, work?—Undoubtedly.

166. (*Mr. Harrington,*) You think that the fact of the wheels showing signs of skidding shows that the vacuum brake was working?—There might be another cause; the wheels could skid if the engine were reversed.

167. That is precisely the opposite of what you said to Mr. Huggard?—It is not the opposite.

168. Can you tell me of your own knowledge, any occasion or date on which Redshaw drove an engine down that steep before?—Yes, the previous month; the same special, about the very same time.

169. Who was the guard who was with him on that occasion?—I think the same guard.

170. Show me the book of regulations; does it correspond with the instruction?—It does, of course, except with a few additions of my own.

171. Just open it where the regulation as to speed is set forth. Do you notice any material difference, from the point of giving instructions to men between the manner in which instructions are set forth in your book, and in this sheet. Regulation 8 says, "Nor "5 miles an hour at the following places:—At the "oblique crossings of all roads when approached on "the level or on a falling gradient"? On page 9, I have it, "At all oblique crossings of all roads the speed "must not exceed 5 miles an hour. On the sharp "curves on each side of the viaduct at 10 miles 58 "chains, not to exceed 5 miles an hour," that is Curraduff Bridge, "in crossing Lispole Bridge, 10 miles an hour."

172. (*Major Marindin.*) In point of fact these instructions exceed the order?—They do, sir.

173. (*Mr. Harrington.*) What I was drawing attention to is that it does not specify the places with the same accuracy as the instructions, that a man has rather to find out the places. They are altered in the form in which they are put, and the places not so well indicated?—Those were also furnished to the officials.

174. Did you yourself deliver any copy of this to Redshaw?—Yes.

175. You cannot recollect the date?—I cannot, but I certainly gave him a copy of this. I gave him half a dozen copies, and told him it would be well one was pasted on each engine.

176. Were you at the inquest?—I was.

177. Did you hear the evidence of Graves at the inquest?—Yes.

178. Did you hear him swear he never got a copy of it?—Yes, but I have a witness here to prove he did.

179. You heard him swear it at all events?—Yes.

180. Redshaw was not ordinarily charged with the driving of the engine, could you tell me whether on any occasion on which he was specially charged to drive the engine his attention was drawn to these instructions, that was not his ordinary business?—It was part of his ordinary business.

181. The driving of an engine?—Quite so.

182. He was not engaged for that purpose?—He was engaged for that purpose; he was engaged, I said, as locomotive foreman and emergency engine-driver.

183. Can you charge your memory with any occasion on which he was entrusted with the sole charge of an engine that his attention was drawn to these instructions?—When he came to us first the very first thing I did was I gave him a copy of these regulations, and a copy of this in my hand, a company's rule book.

184. How long was he in your employment?—Since early last October.

185. Do you think he knew the district?—Quite well.

186. I think you said he was three times officially on that journey?—Three times officially driver.

187. And you think he knew the landmarks sufficiently well to follow these instructions?—Quite well.

188. He was a stranger to the county?—He was no stranger to the Dingle system, he was over it nearly four times a week since he came to it.

189. In Dingle itself?—Yes.

190. (*Mr. Adams.*) Used he to go down in the train to Dingle?—No, on the engine.

191. (*Mr. Harrington.*) You speak of your experience on the Great Southern and Western Railway, that experience was confined altogether to Tralee, and in connexion with it?—It was not. I have been in charge of every station from Tralee to the Limerick Junction on the Great Southern system, including the branches.

192. As station-master?—As relieving station master. I have been in charge of all the stations on the Tullow and Baltinglass branch, and repeatedly in Dublin.

193. When you speak of a man not being subject to any examination for the position of engine-driver, do you mean to say that of your knowledge? Suppose it was the practice, could it have been the practice without your knowledge; did you come in contact with that part of the work?—It may have been the practice without my knowledge.

194. (*Mr. Horgan.*) Who appointed you?—To where?

195. To this station?—What station?

196. Tralee?—The directors of the Tralee and Dingle Railway Company.

197. There were no directors until the line was taken over?—Well, that is a matter I have nothing to say to.

198. You will have to say to it, with the greatest possible respect. You were appointed by nobody then belonging to this line?—I was appointed for the preliminary work of getting the line in order.

199. By whom?—I got my appointment from their secretary at the time, Mr. Fitzgerald.

200. What secretary? — The secretary of the Dingle Railway Company.

201. There was no Dingle Railway Company in existence until it was taken over, you were appointed in August?—Quite so.

202. The line was not taken over from the contractor then, is not that so?—It is, undoubtedly.

203 You were, therefore, appointed before the line was taken over from the contractor?—Yes.

204. Therefore you were appointed by nobody but the contractor?

205. (*Mr. Adams.*) I beg your pardon, now surely the company was in existence when the line was given over to the contractor, and remained in existence, and the directors were there, is not that so?—Yes.

206. Simply because the company in the usual course handed over the construction of the line to the contractor, that did not in any way suspend the powers of the directors?—Mr. Horgan is under the impression that it sprang into existence the day of the opening.

207. Where you not appointed long after the date of passing of the Order in Council?—I was.

208. (*Mr. Horgan.*) When was the railway taken over at any rate, because you had no baronial directors then?—Certainly.

209. When was the railway taken over?—Why did you not ask the secretary about that?

(*Mr. Adams.*) Oh, answer the question, please.

(*Witness.*) The date of the opening was 31st March 1891. I was appointed in August of 1890.

210. (*Mr Horgan.*) Then the baronies had no more control over your appointment than the man in the moon?

(*Major Marindin.*) Mr. Parkes was appointed by the Board of Directors as it then existed. After the openings of the line under the order there were fresh directors added for the baronies.

(*Mr. Horgan.*) Quite so, but the manager of this line was appointed without a single particle of voice on the part of the baronies.

(*Mr. Adams.*) Surely you did not expect that they would open the line and then appoint a manager.

211. (*To witness.*) Did the baronial directors when they came on in any way object to your continuing as manager?—No.

(*Mr. Huggard.*) As a matter of fact they were appointed before that date.

(*Mr. Adams.*) So I thought. The baronial directors were appointed long before the opening of the line, were they not?

(*Mr. Huggard.*) They were appointed at the Presentment Sessions of May 1890.

(*Mr. Adams.*) What has happened is this, the board properly constituted appointed a manager before the opening of the line; it would be ridiculous to appoint him afterwards, then we are told that other gentlemen were appointed directors, they in no way objected to the appointment, and we must regard that matter as closed.

(*Mr. Huggard.*) Mr. Watson, Mr. Hussey, and Capt. De Moleyns were all baronial directors, and all three were present at the meeting at which Mr. Parkes was appointed.

(*Mr. McCowen.*) That was 2nd August 1890.

(*Mr. Adams.*) We must go into this for the purpose of closing this matter once for all. [*Reading from minutes.*] "A meeting of the directors of the
" company was held, in the offices of the company,
" 25, Denny Street, Tralee, on the 2nd August 1890,
" Colonel Rowan in the chair. A. McCowen, S. M.
" Hussey." Was he a baronial director?

(*Mr. Huggard.*) Yes.

(*Mr. Adams.*) "A. Blennerhasset, J. M. Watson, J. W. Busteed, and Hon. E. De Moleyns." Was he a baronial director?

(*Mr. Huggard.*) He was, and Mr. Watson.

(*Mr. Horgan.*) I say they were not then.

(*Mr. Adams.*) Now that inquiry is absolutely closed on that point.

(*Major Marindin.*) It really does not matter. Mr. Parkes was appointed by people who had power to appoint him; and he remained in office, and we must take him as the manager of the line.

212. (*Mr. Horgan.*) You had nothing to do with the Great Southern Railway here except as bookkeeper until you left Tralee station, is not that so?—It is not so.

213. What were you at in Tralee under your father?—I am not speaking of Tralee.

214. You had nothing whatever to do with railway management except in the booking office until you left Tralee?—I had not.

215. How long were you in the booking office in Tralee?—Upwards of 20 years.

216. Then you had nothing to do with railway management except in the booking office for that period?—Quite so.

217. When did you leave Tralee?—I could not exactly say.

218. Come now, that is a matter you ought to remember?—I should say about seven or eight years ago.

219. Where did you go to then?—I went to Tullow.

220. On the Great Southern and Western line?—Yes.

221. What were you there?—I was managing the station at Tullow.

222. You were not the station-master?—Yes, I was.

223. How long did you remain station-master?—About two years.

224. Where did you go to then?—I was then promoted to a place called Clare.

225. At any rate, had you any control of the engines or anything else except as manager?—I used to arrange the great Banagher Fair, arrange all the specials for Banagher Fair from that place, which was a large junction.

226. Very well then, of late years you say you are connected with the management of the Great Southern and Western Railway; where did you come from here?—From there to here.

227. (*Mr. Adams.*) You say you had to arrange for the Banagher Fair; that is one of the greatest fairs in Ireland?—Yes, lasts some five or six days.

228. (*Major Marindin.*) You learned your knowledge of traffic management in those eight years as

station master under the Great Southern?—That is so.

229. (*Mr. Horgan.*) You were never actually taught it, except from the experience you have had?—Yes.

(*Major Marindin.*) It is very usual in small lines for people who have been trained as station-masters to come forward as traffic inspectors and traffic managers.

230. (*Mr. Horgan.*) You had this man Graves dismissed, who drove this engine for a year and a half without accident?—

(*Mr. Adams.*) We can have no inquiry as to Graves, for, observe, it will raise an absolutely irrelevant issue, if he was the best or the worse driver; we must start with the appointment of Redshaw.

231. (*Mr. Horgan.*) Have you the testimonials of Redshaw?—I think Mr. Morphy has them.

232. Let us have them; they belong to the company?—Mr. Morphy had them at the inquest, and I did not get them since.

233. (*Major Marindin.*) Try and find them by to-morrow.

(*Witness.*) I expect I will have them for you by to-morrow.

234. (*Mr. Adams.*) Did Mr. Morphy take away the papers?—He took away all the papers he had.

(*Mr. Huggard.*) He did not give me back his brief, but I can telegraph to him for it.

235. (*Mr. Horgan.*) Redshaw, you say, was engaged in Dundalk before he came here?—So I heard.

236. Have you not authenticity for it, or certainty?—Oh, yes.

237. Not as an enginer?—As a fitter.

238. How long was he in Dundalk?—I cannot exactly say, but he was with that company for about five years.

239. How long was he in the Great Northern then?—That is the Great Northern.

240. That was the only testimonial you got with him?—That was all.

241. Am I right in saying that the directors who appointed Redshaw had no railway experience whatever?—I cannot tell you that.

242. The five directors were Col. Rowan, Mr. Blennerhasset, Michael McMahon, Mr. Watson, and Mr. Collier. They had no experience whatever of railway management?—I cannot tell you.

(*Mr. Adams.*) For good or ill we have this fact; Redshaw was appointed upon the faith of a certificate, which we will have in due course, from the Great Northern Railway; it is for us to judge afterwards whether or not that was a proper appointment to make; but kindly pass now to something else.

243. (*Mr. Horgan.*) Now on the occasion of this catastrophe I believe he was an emergency engine-driver?—Yes.

244. And he was not in the habit of driving the engine to Dingle at all?

(*Major Marindin.*) He has said that.

(*Mr. Adams.*) I think he stated very fully and more than once all the experience Redshaw had.

245. (*Mr. O'Reardan.*) Was it as an engine-driver you employed Redshaw?—As locomotive foreman and emergency engine-driver.

246 Did you advertise? Show me the advertisement?—The advertisement, as well as I remember, was for a locomotive foreman.

247. That was in connexion with certain repairing sheds you were getting up at the station in Tralee?—Yes.

248. Was it not as superintendent fitter?—A great many of the superintendent fitters are also engine-drivers; it was also the same with his two predecessors.

249. It was as a fitter, principally in connexion with these repairing sheds that you got Redshaw?—Partly.

250. Now coming back to the vacuum, there is a rule in your line that an engine cannot start on this incline under 18 inches of a vacuum?—Yes.

251. If a train started with 17 inches of a vacuum——

252. (*Major Marindin.*) We have not had that in evidence yet, as to how much vacuum they had or had not; you can get that presently. Can you give me a list of the stations or stopping places on your line?—Yes.

253. And the distances apart?—I can give you the exact time-table of that train; it was a cattle train; it was not a special.

254. Have you calculated whether a driver who attends to the instructions as to limits of speed at the different points of the journey can do the journey in the time you allow him?—Yes, that time is calculated on the portions of the line that is enclosed off the road on which you can attain a certain speed, and on the speed on the roads, and taking the inclines into consideration.

255. But what I mean is this: if a driver attends to your regulations as to limits of speed at all points of the line, can he keep that time-table with his engine in proper order?—He can.

256. One thing about Renshaw as a fitter; I take it as far as the use of the continuous brake goes he probably knew more about it than an ordinary driver would?—He knew more about it.

257. It was his duty to look after the parts?—Yes.

258. And see that these continuous brakes were in good order?—Quite so.

259. Have you a report on that engine as to its condition from anybody?—Mr. Redshaw used to keep a book in which the repairs to that engine were recorded.

260. Can you give me the repairs to that engine when it was last in the shops?—I can.

261. You had better get an extract made that will show the last time the engine was in the shops.

(*Mr. Huggard.*) We will produce two fitters who had this engine in the shops.

262. (*Mr. Harrington.*) There is one question, sir, I should ask. The last of these regulations says:—"The company shall place, and keep placed in a "conspicuous position inside of each carriage in use "on the light railways a printed copy of these regu"lations"?—That is done.

263. Are they on any carriages on the line now?—They are, every carriage.

264. (*Mr. Huggard.*) Who had ordinarily the control of the drivers who told off the different drivers to go out each morning?—Mr. Redshaw did.

265. And he was the head driver?

(*Major Marindin.*) No, he was in charge of the drivers.

266. (*Mr. Huggard.*) And he sent himself out this day, it was not by your orders?—Quite so; he came to me himself and told me two of the drivers were under the influence of drink two or three days before; he went out to Castlegregory and found one helplessly drunk, and the other man under the influence of drink, he dismissed one and reduced the other Then coming back word had arrived by train that the only man we had available had got an attack of English cholera, and therefore we had no man to send; poor Redshaw saw there was no persons to go, and went himself, as he often did before.

267. (*Major Marindin.*) Did you not instruct him to go?—Oh, no.

268. (*Mr. Harrington.*) I understood you to say that he had gone that same journey the preceding month; did all this chapter of accidents contribute to make up the same state of things?—No, he went the preceding month from choice.

(*Mr. Morphy.*) I appeared before the coroner for the next-of-kin. I was not here at the opening part of the inquiry, but I understand the memory of this unfortunate driver has been libelled all round.

(*Major Marindin.*) I do not think so, but a question seems to have arisen that Redshaw was not a competent driver. Mr. Parkes has given his evidence in a very straightforward way, and said he considers he was a competent driver, and is going to produce to-morrow the certificates under which he was appointed as locomotive foreman, in charge of the shops, and to act as emergency driver.

(*Mr. Adams.*) You were entirely misinformed if you think any man libelled him, the only questions asked pointed to the efficiency or inefficiency of Redshaw, that is entirely within the scope of our inquiry, and any information on the subject would be courted by us.

269. (*Mr. Morphy.*) With regard to that last answer I think you must admit that on this day Redshaw went out with your knowledge?—Undoubtedly.

270. Because I understood you to say he went out of his own motion, and not, practically, by your authority at all?—Oh, no; he did not require my authority to go, but he went out with my knowledge.

271. If he had not gone out would you not have told him to go?—I possibly would have gone out myself.

272. Would you not have told him to go?—I would not; I might have suspended the special.

(*Mr. Morphy.*) This may become material, whether this man went out as a volunteer or by orders.

(*Major Marindin.*) He was in the position of a locomotive superintendent, who was entirely responsible for the drivers who go out, the traffic manager had nothing to do with it.

(*Mr. Adams.*) Redshaw was a man believed by his employers to be perfectly competent. On this day it was necessary someone should go out, everyone else had failed, and Redshaw went out, in my opinion, with the sanction and by the authority of his employers; it was his duty to go.

273. (*Mr. Horgan.*) Do you know that some of your fitters refused to go with Redshaw as firemen?—I do not know any such thing.

274. Did you hear it?—Never.

275. Not on this occasion, but on other occasions?—On any occasion.

George A. Hickson, C.E., sworn.

276. (*Major Marindin.*) You are the engineer of the line, are you not?—Yes, sir.

277. How long have you been engineer to the line?—Since the promotion, and since the opening of the line. The promotion took place in 1884, the line was passed in 1884. I was associated with Mr. Ryan in Dublin, who has not been connected with the line since the opening for traffic, I have been in sole charge of the line since the opening for traffic.

278. Can you inform me of the manner in which the line was constructed, have you the specification that was handed to the contractor?—I can show you the specification that was agreed on with the contractor.

279. Can you say of your own knowledge that the line was made in accordance with that specification?—Yes.

280. In all respects?—Yes.

281. You are well acquainted, no doubt, with the deposited plans and sections?—Yes, I prepared them.

282. And with the curves and gradients upon them?—Yes.

283. Can you tell me whether the line was made in accordance with those curves and gradients?—In a great many cases the curves and gradients were improved from the preliminary plans; in fact there was a second Order in Council got for the deviations from the original plans for the purpose of improving the line coming into Tralee, and in two or three other places out along the road, those were all reported on by the county surveyor at that time, and he reported before the Grand Jury that those were a great improvement to the line.

284. Those deviations formed the subject of a second order?—Yes.

285. And they practically became, like an ordinary deviation in a Parliamentary plan, the authorised line?—Yes.

286. And the line was made in accordance with those deviations?—Yes.

287. (*Mr. Adams.*) Were the deviations reported on by the Board of Works also?

(*Mr. Huggard.*) They were.

288. (*Major Marindin.*) As a matter of fact, were there any deviations at this particular place, Camp?—No.

289. So it does not matter so much about the rest of the line. Can you say that in no place was there anything worse as the line was made, any worse gradients or curves?—Oh, no.

290. What was the authorised curve at this particular place?—I would like to show you a clause in the specification.

291. First of all what was the authorised curve in the deposited plans?—Three chain radius. Under the paragraph the contractor was entitled to lay the line anywhere within the limits of deviation.

292. “The contractor has the power to place the centre line anywhere within the limits of deviation shown on the plan, provided that in so doing he is to introduce no curve of less than 3 chain radius,” and the plans are to be submitted to the Board of Trade. Were they ever submitted to the Board of Trade?—They were deposited with the Board of Trade.

(*Mr. Huggard.*) They were in this way that the Tramways Act required where tidal waters were affected that the plans should go in, and in this case they did go in to the Admiralty Department.

293. The Privy Council do sometimes transmit these plans to the Board of Trade for observation, in this case I am told they never came near the Board of Trade until the line was submitted for inspection. Under the specification the contractor was forbidden to lay anything under 3 chains, and that was attended to?—Yes.

294. Since this accident have you made an accurate survey of that part of the line where it happened?—I have examined the line there very carefully.

295. Did you take the actual gradients from a point a quarter or half a mile above Camp; can you tell me what they are?—I took levels from the village down to the Junction. From the village I found a gradient of 1 in 35, or a fraction over 35; then 1 in 80, then 1 in 100 across the bridge.

296. You are getting below the bridge now?—I am just past the bridge.

297. We do not want that particularly. What is the approach to the bridge?—One in 80.

298. What does the deposited plan show?—One in 30, I think.

299. One in 100 comes in somewhere?—That is on the contract plan.

300. And you have given the actual plan?—One in 30, and then horizontal over the bridge.

301. Can you tell me the curves?—There is a straight portion approaching the bridge, 400 feet long.

302. You come off a right-handed curve on to the straight?—And then a left-handed curve.

303. Then you have 400 feet straight?—Yes.

304. And then you have a left-handed curve?—Yes, of 200 feet radius.

305. Laid out round the bridge?—The bridge is laid out on the curve.

306. That is what it is to-day?—On examination of the line I find it varies a little bit, not quite regular, that might have been from pulling and lifting since the accident.

307. That will require adjustment?—Yes.

(*Mr. Harrington.*) That is, the curve is not quite regular.

308. (*Major Marindin.*) Yes, I measured it myself.

(*Witness.*) You see our permanent way inspector was killed in the accident, and a ganger cannot do that exactly right.

309. Have you had much experience in watching the running of the line?—I have travelled a great deal over the line. I am living on the company, but I have nothing to say to the line beyond looking after the permanent way.

310. Then you have on more than one occasion travelled down that incline towards that bridge?—Oh, often, and frequently on the engine.

311. What has been your experience with regard to the speed?—Well, coming down that incline I have always found that engine-drivers are able to control their trains, coming at a uniform speed, and I do not think, except on very few occasions, it exceeded 10 to 12 miles an hour.

312. That would be the limit when alongside a road?—It would be rather faster, but of course a train could be checked.

313. (*Mr. Adams.*) Rather fast, where?—Six miles an hour is the regulation going half-way down the hill.

314. (*Major Marindin.*) That will be in the Act, will it not?—I think so.

315. (*Mr. Adams.*) Do you mean to say they go twice as fast as the limit of the Act?—No; I say I have on some occasions come down there rather faster than the regulation speed.

316. (*Major Marindin.*) But not habitually?—Oh, no.

317. Have you found that when they get to the bottom of the hill they observe that limit of speed of five miles an hour round that curve over the bridge?—Nearly always. In fact the rule is, always coming down to the village they have to be very careful coming through a bunch of houses, and for that reason they check their speed coming to the village, and then they have their train in perfect control coming to the bridge, and can cross it at any speed.

318. Do you think the limits of speed being observed is it safe for your engine to go round a three chain curve?—Perfectly safe.

319. Do you know other narrow gauge railways?—I have been on several in Ireland.

320. Do you know whether there are on other railways curves as sharp?—I do not think there are curves so sharp as three chains, but I know there are gradients much steeper on the Clogher Valley Railway. I laid out portions of that myself. There are a number of railways with steeper gradients and as sharp curves.

321. Can you tell me the steepest gradient you know?—All I know of is 1 in 30. My partner, Mr. Ryan, has told me of gradients in America of 1 in 25.

322. Have you been on the engine yourself, both going up the hill and coming down down the hill to Camp?—Yes.

323. Can you tell me whether it is the habit of the driver, in order to save steam coming up the incline, to shut off his small ejector?—No, I think when the vacuum is connected they always leave the small ejector on.

324. When the vacuum is connected?—Yes.

325. Always?—Yes.

326. When is the vacuum unconnected; have you ever come up on a train with the vacuum disconnected?—I have not. The only time I know of is on this occasion, when the evidence showed the vacuum was not connected.

327. We will deal with that afterwards; but you do not know any occasion when a driver coming up the incline cut off his brake altogether, or has run up the incline with the small ejector shut off?—No.

328. Have you noticed what is the habit of the driver coming down; does he apply his brake at the top, or does he let it run pretty fast round that first part after leaving the top of the incline?—No, drivers I came down with came down very steady all the way; an equal speed all the time, but applied the vacuum brake intermittently, when they found the train going a little put it on, released it, and put it on again.

329. But you have never known any difficulty in keeping the train under control?—No; I have applied the hand brake myself when the driver was applying the vacuum.

330. In addition to the vacuum brake, which I believe is on every vehicle, in addition to that there is a hand brake?—There is a very strong hand brake on the engine, and there is a hand brake on the guard's van; it is not heavy, it is only a light waggon converted into a guard's van with a vacuum gauge.

331. Can you give me the weight of the train?—Yes, Mr. Parkes can give you that.

332. Will you put in returns, Mr. Parkes, to-morrow, showing me the weights of each of the vehicles, the weights, tare, and as they were loaded?

(*Mr. Parkes.*) Yes.

333. Now the engine, there are eight wheels?—Six wheels coupled and a bogie.

334. There are brake blocks on the six wheels, but not on the bogie?—Yes.

335. How many wheels on the carriages?—A double bogie at each end.

336. How many wheels are braked?—All.

337. Therefore every wheel of the train is braked except the small bogie wheels on the engine?—Yes.

338. As to the maintenance of the line, how many gangs have you?—Eight gangs, three men and a ganger in each.

339. And an average length of what?—From three to four miles.

340. Of single line?—Yes.

341. When did you last examine the line at this particular part?—I have been out there three times since the accident.

342. But before the accident, of course, your ganger has to walk the length every day?—He has to walk a part of the line every day, not his whole length, he could not walk 31 miles.

343. I am talking of the ganger?—Oh, the ganger is supposed to walk his three miles every morning and evening. On the 16th and 17th May I went to Dingle, and came back the following day.

344. Was the line in good order at that time?—All in good order.

345. Can you tell me, going round this curve, was the gauge pretty even?—It is pretty even, from three-quarters of an inch to an inch of slack going round the sharp curve.

346. Can you tell me what the super-elevation is?—From 4¾ to 5 inches.

347. Is the curve checked?—Yes, there is a check rail the whole length of the curve.

348. What is the interval of the check rail?—2¾ inches between the running rail and the check.

349. Did you notice that the check is very much worn?—There is just a sign of the flange touching it, showing that it is checking well, it is not worn.

350. Have you examined the rolling stock since the accident?—I was out the next morning at 7 o'clock.

351. Can you form any opinion as to whether the vacuum brake had been applied on that train coming down?—It had been applied, both in the guard's van and in the engine.

352. How can you tell?—The handle was to the full on in both vehicles.

353. Can you tell by examination of the wheels?—I could see by the wheels, the trailing driver of the engine is scored in one place about one-eighth of an inch, as if it had been sliding.

354. Can you tell me whether that had been done on that occasion, or on some other occasion?—It was not on some other occasion, because those wheels had been turned, and a splendid flange put on them a short time before.

355. Can you tell me where you found the first mark of any sort or kind on the rails or permanent way of the engine, or any other vehicle having been off the rail?—The first mark was 78 feet from the commencement of the curve to the east of the commencement of the check rail, it was a mark on the outer edge of the sleeper.

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356. A cut on the sleeper ?—Yes, and then 22 sleepers had the ends cut off them, further in towards the bridge. Two sleepers were pushed on in that direction, the fastenings pushed out, and they were put skew-ways, but the inside part with the check rail was not disturbed.

357. Did you find any mark at all on the rail ?—No mark on the rail, either on the high leg or the low leg.

358. What do you infer from that, it is perfectly clear that the right leading wheel of the engine—how was the engine running ?—Bogie first.

359. The right wheel of the engine got over the high rail somewhere ?—Yes.

360. But left no mark in going ?—No mark at all in going across.

361. What do you infer from that ?—Either the engine jumping from reversing or skidding from some obstruction put on the line in front of it.

362. Did you find any sign of any obstruction ?—I found none on the first day, but on the second day; I went out first on the Tuesday and then on the Thursday—the accident took place on Monday evening—and on the Thursday I found a fang bolt in the river behind where the engine is lying; the fang bolt was bent, and it is one of the strongest bolts employed on that bridge.

363. Was that fang bolt missing from any part of the line ?—No, there was no bolt missing. There had been some new sleepers put in slightly above the beginning of the check rail.

364. You found a fang bolt lying under the engine as if carried there ?—Five or six yards from the engine in the river further back.

365. Perhaps you will describe the fastenings in that particular part ?—This fang bolt (*produced*) is for the purpose of holding the rail on the sleeper, it is a bolt going through the sleeper with a clip on the cap like a washer, underneath there is what they call a crab, when you screw the head of the fang bolt you squeeze the whole thing together, and fasten the rail to the sleeper.

366. The fang bolt might have been chucked into the river ?—I cannot say; the crab was screwed on the wrong way to begin with, the claw was turned out, and it was quite easy to unscrew it, and there was the mark of a stone on it.

367. Apart from that you have no suspicion of any obstruction on the railway ?—I have not.

358. And you think the engine must have jumped off ?—Must have jumped off.

369. Would you infer she had been running at a high speed ?—Certainly, and from inquiries I made I find she was running at high speed.

370. The position she is lying in she could not have got into unless she was running at high speed ?—She must have been going 40 miles an hour at least.

371. She seems to have gone right across the river ?—She slid down the bank first, because I found mud and grass on her working parts, then she struck the retaining wall, and turned over and slid across the river.

372. She went across those stones on her side ?—Yes.

373. (*Mr. Adams.*) Do you consider the railway at that bridge is in a dangerous state, I mean to say, apart from the way the train was running, do you consider it a dangerous construction ?—No, it is quite safe if you run at a proper speed; the cant of the curve is calculated for 20 miles an hour.

374. To what do you attribute the accident, after hearing the statement by the guard and all the information you have been able to collect ?—My impression is that the engine-driver lost control of the engine, and that was partly through not being able to use his vacuum brake, the rail was greasy and the engine-driver evidently got his brake screwed up as tightly as possible and the engine skidded. Then he reversed her and that reversing—I had no opportunity of examining the lower part of the engine—I think must have broken the packing near the cylinder, and the steam escaped and he was powerless.

375. (*Major Marindin.*) You think the steam escaped from where ?—From the cylinder.

376. That ought not to affect his brake ?—It would not affect his hand brake.

377. It ought not to affect his other brake ?—The vacuum brake was opened in the guard's van.

378. The escape of steam would not affect his vacuum brake ?—No.

379. (*Mr. Adams.*) I presume there can be no doubt that the train came down at an enormous rate of speed and jumped into the river, and you do not seriously attribute anything to this pin ?—[*No answer.*]

The inquiry was adjourned to next morning.

Thursday, 8th June 1893.

The inquiry was resumed at 10.30 a.m.

GEORGE A. HICKSON further examined.

380. (*Major Marindin.*) Can you tell me, do you know who supplied the brakes that were on this train ?—The automatic brake was supplied by the builders of the carriages and waggons.

381. Do you know who supplied the machinery, the Automatic Brake Company, was it not ?—Yes, Gresham and Craven.

382. And they superintended the fitting of it, did they not ?—I think not; I think that was all done at the Bristol Waggon Works.

383. I believe Mr. Gresham told me his son went down ?—I do not know that, but I know young Mr. Gresham has been down here.

384. Do you know the pattern of brake that we see upon ordinary trains ?—Yes.

385. And this is exactly similar, only it is rather smaller in proportion to the size of the vehicle ?—Yes.

386. Do you know what your regulated load is on these lines ?—The specification states that the engines are supposed to draw 80 tons at five miles an hour up the gradient with a good rail.

387. Have you ever made a calculation yourself as to whether they are capable of doing that ?—I would not like to put more than about 60 tons on them.

388. Have you made a calculation in the ordinary way yourself ?—Well, I have not gone into the calculation. A good deal depends, of course, on the state of the rail and the condition of the engine.

389. Is there any rule of the company as to the load it is to take ?—I do not think there is any load mentioned in the rule book.

390. No limit of load ?—No.

391. Do you know the dimensions of the engine, the diameter of the cylinders ?—13 inches.

392. And the stroke ?—18-inch stroke, I think.

393. Do you know the pressure of the steam in the cylinders ?—It has been tested up.

394. That is the boiler pressure ?—I do not know about that. I have the plans of the engine here. I am not very well acquainted with locomotive work. The safety-valve is loaded to 120 lbs.

395. 120 is your steam-pressure ?—Yes.

396. The driving wheels are 3 feet diameter, are they?—I do not know, I will find that out for you.

(*Mr. H. Peet.*) 4 feet 0½ inches.

397. Then have you ever tried whether it is possible to avoid that bad curve in the construction of the line, to improve the line by getting rid of it?—Yes, I have; you could improve that line by going further up the valley, you would lengthen the line, but you would reduce the gradient and ease the curve.

398. Which way would you go?—Further up the valley, further up than the bridge is at present.

399. (*Mr. Harrington.*) Cross the stream higher up?—Yes, it would lengthen the line by 1½ or 2 miles.

400. (*Major Marindin.*) Would that be a very expensive business?—It would cost the extra mileage at all events.

401. But I mean to say in the work?—The work would entail a pretty heavy bank, and some cutting also, a good lot of building, a new bridge.

402. Then of course it would be possible also to cross the ravine lower down, which would be a much more expensive job?—That would be a heavier job altogether, there would have to be big bridging.

403. And there would be a difficulty about the gradient?—Yes, unless you tunnelled at the top of the hill.

404. But either of these plans would necessitate the abandoning of the present viaduct?—Yes.

405. Have you at all considered whether keeping the existing viaduct you could improve it by going into the hill?—You could ease the curve at either side entering on it.

406. But not the viaduct itself?—Hardly, the bridge is built on the curve.

407. (*Mr. Adams.*) Would going higher up cost much, as you propose?—That is lengthening of the line. Taking that in connexion with a tunnel at the top of the hill, it would improve the gradient, because in my opinion the gradient is the great difficulty, on that hill it is practically 1 in 30 for three miles. To improve that gradient, as I advocated from the first time the line was promoted, the tunnel should be at the top of the mountain, at the summit.

408. (*Major Marindin.*) Yes, but we have hardly got up there; it is at this particular point, the deviation you mentioned striking southwards from the present bridge?—8,000*l.* or 10,000*l.* ought to improve that.

409. (*Mr. Adams.*) I presume the company has no fund of any kind?—The company has no working capital.

410. (*Mr. Huggard.*) The train as made up on this particular day of the accident, can you tell me what it consisted of?—I am told there were seven waggons, a guard's van, and a passenger carriage.

411. And those goods vans were loaded with pigs?—Yes.

412. Can you tell what was the total weight of the train on that day?—I have made a calculation, and it weighed 43¼ tons.

413. (*Major Marindin.*) Did that include the engine?—Not including the engine.

414. (*Mr. Huggard.*) Are the company in the habit of running very much heavier trains than that?—That would not be considered a heavy train.

415. Can you say what is the heaviest train you have run over the line?—About 60 tons

416. That is exclusive of the engine also, I suppose?—Yes.

417. Touching brakes, did the representatives of Messrs. Gresham come down here to Tralee to see them in working order?—Yes, I think it is about a year ago he came round and inspected all the vacuum brakes.

418. And recently again was here?—Not since, I think.

419. As you come down this Camp incline is there a curve at Ballygarrett Bridge?—There is.

420. (*Major Marindin.*) Can you tell me the mileage of that?—It is within about 100 feet of the 11¾ mile post.

421. (*Mr. Huggard.*) Have you formed any idea from what you have observed, and what you know of this accident, as to whether the train had attained great speed at that point?—I believe it was going pretty fast at that point, it was getting faster, from information I got up there on the spot, people who saw the train coming down the hill.

422. Is that a difficult curve to go round?—It is not a bad curve, it is very short but very sharp.

423. Now upon this particular day can you tell us anything as to the condition in which the rails were?—The rails were bound to have been as slippery as possible that day, because it came after a long time of dry weather, and fog came down and made the rail as greasy as possible

424. Is it a fact that rain coming after three months of dry weather would produce a greasy rail?—It would; fog always creates the greasiest rail.

(*Major Marindin.*) He is quite right; he told you a fog was the worst; a "washed" rail is not a very bad rail.

425. (*Mr. Huggard.*) I am wrong, the theory was put forward here—I am not sufficiently up in the matter to say whether it is correct—that we had had three months of dry weather, and a sort of flint settled on the rail, and the rain coming on the top of that made it greasy. At any rate, we had that fog upon this morning, and you believe the rail was undoubtedly slippery with it?—It was very slippery.

426. We will have the guard of another train to give evidence about it. There have been some attempts to interfere with this line by some people in the district from time to time?—There have indeed.

427. Have complaints come in from drivers that the rails have been soaped?—Yes, I have heard complaints of that sort.

428. Can you say at what points the complaints stated?—There were two places mentioned where the rails were greased or soaped, one is at Aunascaul on an incline of 1 in 30, and the other then above Camp Bridge.

(*Mr. Harrington.*) I am afraid we will unduly protract this inquiry if we go into this. My instructions were to go pretty fully into it, and I declined as I thought it was outside the inquiry. I am informed there are persons travelled by the train when the allegation was made, and they came out and took the guard out of his van, and it is said they put his nose down to the rail to convince him there was no soap.

(*Major Marindin.*) I think it is better if you have any direct evidence that the rail was greasy or was soaped.

(*Mr. Huggard.*) We will not have any direct evidence that the rail was soaped upon the particular day of the accident, but we have altogether been unable to account for this accident happening; to my mind we have sifted it in every way, and we think it is right to put before you this evidence.

(*Mr. Adams.*) Have you any evidence that it was soaped any day?

(*Mr. Huggard.*) We have the evidence of a driver named Quinn, and it will be proved to satisfaction that the line was soaped.

(*Mr. Harrington.*) We will meet that very easily by showing that the people of the district are unable to buy soap to wash themselves with, much less to use on miles of railway.

(*Major Marindin.*) If you produce a driver to say the rail was soaped we will be bound to hear him.

(*Mr. Adams.*) And, on the other hand, we will be bound to hear anyone who says it was not soaped. Do you know whether those complaints were conveyed to the police?

(*Mr. Huggard.*) Yes, we will show you our letter to the police?

429. Were you travelling upon a train in the month of May when a fang bolt was found driven between the rails at Glanmore?—A police officer was travelling

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by the train, and he came to me at the next station and asked me to identify it, and he told me where it was found.

430. Did the police officer take charge of the bolt?—Yes, and kept it.

(*Mr. Huggard.*) I telegraphed to this police officer last evening asking him to attend here; he is the district inspector of police at Dingle, and he has wired me back:—"Will you guarantee expenses. Cannot go "to-morrow. Wire will Friday do."

(*Major Marindin.*) Yes, Friday will do.

431. (*Mr. Huggard.*) Did you inspect the fang bolt yourself?—Yes.

432. Explain how it was driven down?—It was driven down between the joints, the engine and carriage went over it, and the train was stopped in consequence, and they found it and brought it away.

433. Did that happen more than once?—It happened several times.

434. (*Mr. Adams.*) To your knowledge?—To my knowledge; I was in the train one day and counted 12 coming down the incline.

435. (*Major Marindin.*) Twelve what?—Spikes driven between the joints. I was on a contractor's train. It was before the line was opened.

436. (*Mr. Adams.*) Was that done deliberately?—Certainly.

437. (*Mr. Huggard.*) Since the accident have there been any matters of the same kind?—Big stones put on the line.

(*Mr. Harrington.*) I must say I am rather surprised at the company deliberately opening a field of this kind, which will compel us to go into it. I think it is a very injudicious thing for the company to challenge us. We are inquiring into an accident, and anything that can throw light on it may be of use, but to go into the history of the relations between the company and the people will be very injudicious for the company themselves.

(*Major Marindin.*) That is for the company to consider.

(*Mr. Harrington.*) I was advised to go into it, but I thought it was outside the scope of your inquiry, and I rather thought from your opening remarks that it was so. I would be unwilling to go into it, but I will do so if Mr. Huggard challenges it.

(*Major Marindin.*) I do not think we ought to go into anything that happened after the accident, anything that tends to make an accusation, or shows bad feeling; but if anything shows that it is possible this accident was caused by a spike or bolt or stone being on the rail it is quite right we should hear all the evidence we can about it.

(*Mr. Huggard.*) Well, sir, I suppose we may pass away from the entire subject now.

(*Mr. Adams.*) You have exhausted it, I suppose; that is very generous of you.

(*Mr. Huggard.*) I would like to read for you the letter which we wrote on the 15th April to the company's inspector of police in reference to the rails:—"Sir,—I beg to inform you that on several "occasions latterly our rails have been rubbed over "with soap on an incline of about 250 yards on the "Tralee side of Aunascaul, and again at the very "steep incline at Camp village. This is particularly "dangerous, much worse than grease, and renders "our powerful brakes useless if applied."

(*Mr. Harrington.*) I am told that Major-General Hutchinson actually came here to make an inquiry with regard to this allegation, and if he has taken evidence with regard to it, and made a report, would it not be better for the Commissioners to have his report?

(*Major Marindin.*) Oh, certainly.

(*Mr. Huggard.*) I do not think there was anything of the kind at all; this is a letter written since Major-General Hutchinson was here.

(*Major Marindin.*) General Hutchinson was here about that time.

(*Mr. Harrington.*) When this letter was written as a matter of fact General Hutchinson was inquiring into the matter.

(*Major Marindin.*) Was this letter produced before General Hutchinson at all?

(*Mr. Huggard.*) I do not think so.

(*Major Marindin.*) Well, was this fact mentioned before General Hutchinson?

(*Mr. Huggard.*) I do not think so.

(*Major Marindin.*) He was inquiring into a totally different matter.

(*Mr. Huggard.*) I find he was here on the 22nd March.

(*Major Marindin.*) You are quite right, the inquiry took place on the 22nd March.

(*Mr. Huggard.*) This letter was not written until the 15th April. It is my recollection at any rate that nothing of the kind came before him at all.

(*Major Marindin.*) It certainly does not appear in his inquiry, which was more in relation to the management of the line, and matters in dispute as to rates, and so on.

(*Mr. Huggard.*) There was no question of the kind came up. We say:—"This is particularly "dangerous, much worse than grease, and renders "our powerful brakes useless if applied, should an "occasion to stop arise at the places mentioned. It also "hinders to a very great extent the wheels of an engine "in getting a proper grip when ascending. Could "you kindly arrange for private inquiry to be made "so as to bring the guilty parties forward? We have "milesmen on the watch, but do not expect much, as "they belong to the district." The reply from the company's inspector was:—"Dear Sir,—Since the "receipt of your letter of the 15th inst., I have had a "careful watch kept on the points of your railway "indicated as likely to have the rails soaped, and it is "reported to me that nothing of the kind has since "been attempted. The police will continue looking "after this matter." That is dated the 1st May.

438. (*Mr. Adams.*) I presume if the line was soaped it would bear traces upon being examined, you would find abundant traces of the soap upon it?—The traces of soap might be rubbed off by the wheels.

439. Surely if it was soaped for a long distance it would be impossible there would not be traces of it?—The way it was done was it was dabbed here and there; you certainly would find traces.

440. Was any search made for such traces after the accident?—There were; the engine-driver got down and examined the line; he says he did not find traces.

441 (*Major Marindin.*) No, the engine-driver was killed, but after this accident?—Oh, the line was examined after the accident.

(*Head Constable Cusack.*) I examined the line immediately after the accident, within an hour and a half.

(*Mr. Adams.*) We will examine you.

442. (*Mr. Huggard.*) Now, Mr. Hickson, upon a day that the rails were not greasy, what would be a safe pace to come down the hill at?—Ten or 12 miles an hour easily, as far as safety is concerned.

443. Could you going at 12 miles an hour, could you in a reasonable distance stop the train with your vacuum brake?—We could stop a train in 200 or 300 yards.

444. Have you come down at 12 miles an hour?—I have, and faster.

445. With as heavy a train as this?—It was a ballast train; it might not have been so heavy.

446. Does the vacuum brake apply to all the carriages on the train?—Yes.

447. Is there a hand brake in every carriage?—No, on the engine and the van at the end of the train.

448. Is there a lever hand brake on every waggon?—On all the ballast waggons there is a side brake.

449. (*Major Marindin.*) Do you know whether there is a brake on these ordinary goods waggons?—Yes, I say there is a side lever brake on all of them.

450. (*Mr. Harrington.*) You heard Mr. Huggard read a letter addressed to the company's inspector?—Yes.

451. It struck you that the language was particu-

larly strong about "our powerful brakes," did it not?—The brakes are powerful.

452. The letter did not refer to brakes merely, but to powerful brakes; would you describe them as powerful brakes?—Certainly.

453. And the brake on this particular engine on this day?—I do not know about that, because I have nothing to say to the locomotives; I know generally about the brakes.

454. You were, I believe, one of the promoters of the line?—Yes.

455. And I think you were sanguine enough to believe at the time, and to assure the ratepayers that this would only entail an expense of about *2d.* in the £ on them?—I fully believed the line would be a paying one.

456. ¾*d.*, but the extreme would be *2d.*, I think, in your statement?—I do not recollect that.

457. And I believe, as a matter of fact, it is now about *2s.* in the £?—Yes.

(*Mr. Harrington.*) I merely ask that in reply to your observation as to where the money could be got from for any alterations.

(*Mr. Adams.*) It is plain there is no money available.

(*Mr. Harrington.*) And I am afraid, sir, there is no money even for buying soap among the unfortunate men up in that district, where it is said to have been so lavishly used. With reference to the bolt, I do not know how much importance you attach to it, but I should like to ask one or two questions.

458. (*To witness.*) You visited the scene of this occurrence on Tuesday?—On Tuesday morning.

459. You did not find the bolt then?—No.

460. You visited it on Tuesday evening?—I was there all day on Tuesday getting the line clear, and on Thursday then I went out to examine the engine more particularly, and it was in the river near the engine I found the bolt.

461. This bolt that attracted so much attention from you, you found in the bed of the river; I think you said something about the mark of a stone being on it?—Yes.

462. If it had been thrown off the line into the bed of the river, a dry river at the time, there would have been the mark of a stone on it?—It might have got the mark of a stone that way.

463. Suppose the bolt had been on the line as you describe, it would have been an extraordinary combination of circumstances that the engine should take head at the very top of this incline and run away down to meet this bolt that was specially put there. But setting that aside, if this engine came in contact with this bolt maliciously would it not be an extraordinary thing that the engine would be lifted out of its way and turn back and take the bolt with it?—My impression is that if the bolt was there it would cause the engine to jump and send it off.

464. And how would the bolt follow it?—A blow from any of the working parts of the engine would carry it away.

465. (*Major Marindin.*) This could not have been in the same position as the other bolts you describe, they were driven?—Yes.

466. And this bolt must have been lying across?—Yes, tilted up.

467. (*Mr. Harrington.*) If it was laid at all on it would have been on the inner rail, but not on the outer one?—No, I think it would have been on the outer rail, the high leg.

468. In the interval between the time the accident occurred and you found the bolt on Thursday, to your own knowledge, there were some hundreds of persons on that line?—There were a great number.

469. The line was being repaired?—It was carried out the first day, and was finished in the evening.

470. Bolts of this kind were in frequent use in repairing the line?—These particular bolts were used on the bridge, they were specially heavy ones.

471. (*Major Marindin.*) There were some of those taken out?—There were a few taken out and others put in again, there were none lying about.

(*Mr. Harrington.*) It was a bent bolt and naturally enough it was rejected in the repairing of the line.

472. (*Mr. Adams.*) Was it bent?—Yes.

473. (*Mr. Harrington.*) I need not labour that point because anyone can see as well as yourself.

(*Major Marindin.*) When you come to see the bolt I do not think it would have been thrown away by one of the workmen of the line; it had the clip put on the wrong way up.

(*Mr. Harrington.*) It might have been rejected, but not thrown into the river; it might have been rejected for the purpose of repair and picked up by any of the numerous persons there and thrown into the river.

474. The jury were all on the scene on Tuesday?—They were. My attention was drawn to this particular bolt in consequence of the attempt made at Glanmore Bridge on 8th May.

475. Now let us have it clearly, in looking at this disaster and what took place about it, you do not seriously believe the bolt had anything seriously to say to it?—I do not say that at all, but I say the position in which the bolt was found makes it perfectly possible that the bolt was on the line.

476. Let us get a definite reply one way or the other, do you connect that bolt with the accident?—I say if the bolt was there——

477. Let us have one straight answer now, there is no use in introducing this bolt if it had not something to say to it?—I think it is my duty to introduce it, having found it in the position in which I found it.

478. Do you in your own mind connect the finding of the bolt with the throwing off the line of the train?—I do personally to a certain extent.

479. Your view is that the train took head at the top of the incline, ran away down, the guard and driver lost all control of the train, it was going at 40 miles an hour, must have been, and your evidence is that it was necessary to have that bolt on the line to throw it off. Would it go off without it?—I will not go so far as to say that.

480. You will not say that it would have gone off, going at the rate of 40 miles an hour round a curve calculated for 5 miles, it would not have gone off without the bolt?—It depends on the way the engine came into the curve.

481. Taking all the circumstances you have heard and described, and your admission that the train was going at 40 miles an hour, would it go off at that curve, calculated at 5 miles an hour, without a bolt or something to throw it off?

(*Mr. Huggard.*) Would it necessarily?

(*Major Marindin.*) Would it probably?—If the train was braked going into the curve it would probably jump off.

482. (*Mr. Harrington.*) With the circumstances I have mentioned, the train going 40 miles an hour, round that acute curve, I believe one of the most acute curves you could imagine, and considering the elevation, and all the circumstances, would it be likely to go off the line, without a bolt to throw it off?—She might possibly go off at 40 miles an hour.

483. Probably?—Well, probably.

484. (*Mr. Huggard.*) Not necessarily?—Not necessarily.

485. (*Mr. Harrington.*) Just coming to that point in your evidence after you discovered the bolt, I think you used the expression "it jumped clean off"?—Yes, it must have jumped clean off; it left no mark on the rails.

486. Upon that question of jumping, I think you said that you noticed that the engine was reversed?—Yes.

487. Would the mere reversal of the engine against the following carriages, pressed on by the other carriages, in your mind be calculated to cause the engine to jump?—It would.

488. Would that without anything on the rails?—Reversing an engine going at that speed would be apt to make her jump.

489. (*Major Marindin.*) Not the weight of the carriages?—No, the fact of reversing.

490. (*Mr. Harrington.*) But would not the jumping be increased by the pressure of the other carriages when they recovered their slack against it?—No, there would not be any bumping like that, going at that speed, the engine would jump on the rails herself.

491. But my point goes a little further, that inasmuch as the engine was pulling, and had the connexion pulled tight, that the moment it was reversed and came against the carriages, especially if reversed at that point, the impact of the carriages would increase the jumping?—I do not think it would.

492. You told us yesterday there were some deviations from the original plan in the construction of the line?—Yes.

493. Was there a deviation at this particular place?—No.

494. I see in a report of Major-General Hutchinson he drew attention to a discrepancy in the mileage, and especially with reference to the bridges; have you any recollection of that?—No, I have not, but I know the mileage would be very slightly altered in consequence of the deviation coming into Tralee.

(*Mr. H. Peet.*) That was all corrected at the time.

(*Mr. Harrington.*) But the singular way it was corrected was that the plans were altered instead of the bridges, which I look upon as a very singular mode of alteration.

(*Major Marindin.*) How could the plans be altered?

(*Mr. Harrington.*) It so happens that it is. Major-General Hutchinson draws attention to the fact that there was a great discrepancy in the mileage, especially as to the construction of the bridges, and he recommended that the plans should be returned to be altered.

(*Major Marindin.*) I think what he meant was that the plans were returned so that the mileage, the figuring, might be altered.

(*Mr. Harrington.*) It may be the plan was wrong, or the bridge set down at the wrong place, that is what I want to get at.

(*Major Marindin.*) In the plans furnished to the Board of Trade the mileage was probably figured on it originally without the deviations, and you will find the plans are probably corrected in red ink, the figuring of them.

(*Mr. Harrington.*) That is what I would like to see, because it struck me as a strange thing that the plans should be returned to be corrected, if the bridges had been put in the proper place, and there had been no deviation from the plan; what I wanted to know is which of the two is correct?—It was the alteration in the deposited plans that made the alteration in the mileage.

495. At the end of the report of the 24th December 1890 this paragraph occurs:—"There is considerable "discrepancy in the mileage of some of the bridges "as given in the details, and as actually placed in "position on the line, and the details should be "returned for amendment in this and some other "details marked on them"?—That did not alter the position of the bridges at all; it was a difference of mileage on the plan, the plan was altered for deviation, and then the mileage counted from another point.

(*Mr. Huggard.*) He referred to a list of bridges which he got the figuring upon.

(*Major Marindin.*) I think, Mr. Harrington, you will find that the original figuring is altered, the original is with the mileage commencing from a certain point, without the deviation, and when they put the deviations in that altered the mileage all up the line. I have the plans here, the original figures in black and the revised figures in red.

(*Mr. Harrington.*) That is what I wanted to get at, so long as it was not the construction of a bridge in a place not authorised by the plan.

496. (*To Witness.*) This line was examined by Major-General Hutchinson at different times?—Yes.

497. Can you say whether you think if he had been perfectly free he would have approved——

(*Major Marindin.*) I do not think we can ask Mr. Hickson what General Hutchinson would have done.

(*Mr. Adams.*) If General Hutchinson made any statement, but you could not ask what was in his mind.

498. (*Mr. Harrington.*) I will read what he said:—"The steepest gradient is an incline of 1 in 30, and "of gradients between 1 in 30 and 1 in 40 there are "on the main line in all about 10 miles, and on the "branch, 30 chains, the longest unbroken length of "these several gradients extending over nearly three "miles is," at this particular point we are speaking of, where the accident occurred, "from 10 miles 66 "chains to 13 miles 60 chains on the main line. The "radius of the sharpest curve on the main line is four "chains, and on the branch five chains. These "gradients and curves are authorised by Orders in "Council." Does that strike you as a remarkable expression to put after the description of these curves and gradients, it looks as if he disavowed responsibility himself?—I do not know.

(*Major Marindin.*) There is a mistake there, evidently a clerical error.

(*Mr. Harrington.*) That is what I am going to come at. I knew you would catch it, sir, and I wanted to know whether it was a mistake. It says, "The radius of the sharpest curve on the main line is 4 chains."

(*Mr. Huggard.*) The original has it so.

499. (*Mr. Harrington.*) That is what we want to come at; that is an important thing. Well, as a matter of fact, the radius of the sharpest curve on the line is not 4 chains?—No, it is 3 chains.

(*Major Marindin.*) I think, perhaps, I may mention that it is evident, in drawing his report, General Hutchinson took the radius of the curve off the details here, and in that this curve is shown at 4 chains; on the plan itself, which was also before him, that curve is shown as 3 chains.

(*Mr. Harrington.*) Precisely so. My point is that Major-General Hutchinson, in approving of this line for public traffic, had the impression on his mind that this curve had a radius of 4 chains instead of 3 chains, and he never would have approved of an acute curve at the end of a long succession of gradients of such a character except in the belief that the curve was a 4 chain radius. I think it is due to General Hutchinson himself that I should draw attention to that, because he has got a good deal of undeserved odium with reference to this line.

500. You have been the engineer of the railway since the report was made; have you ever noticed this discrepancy between the figure in General Hutchinson's report and the actual figure?—No, I did not.

501. Until I drew your attention to it now?—Three chains was what I always said; I never noticed it before.

502. As a matter of fact that makes a very serious difference in a curve, a chain radius?—Yes.

503. And it would make a difference—I do not know that I am sufficiently technical; I think you call it the super-elevation—it would also make a difference in the super-elevation?—It would not make very much difference in that between 4 and 3 chains radius.

504. It would make something of a difference?—It would make a very slight difference.

505. Is there a basis for calculating in engineering what fraction of an inch would a difference of a chain radius make in a curve, disregarding the rate of speed?

(*Major Marindin.*) The great fact is the speed.

(*Mr. Harrington.*) The main element of this thing is the succession of long gradients.

(*Major Marindin.*) In calculating for the super-elevation the speed is the greater factor of the two I think Mr. Hickson is nearly right.

(*Witness.*) Calculated at a speed of 20 miles an hour the super-elevation would be 4·68 for 3 chains.

(*Major Marindin.*) And therefore the super-elevation, as it is now, is very much over.

506. (*Mr. Harrington.*) What would it be for 4 chains?—It would be about 3½ inches.

507. What is it now?—At present it is 4¾, and by theory it is 4·68.

508. (*Major Marindin.*) Your 3½ is given for 5 miles an hour?—No, it is calculated at the same speed 20 miles an hour.

509. (*Mr. Harrington.*) As we have touched incidentally on that subject of super-elevation, we may as well dispose of it. Super-elevation on a curve is an important matter in the construction of a line?—Yes, the cant of the curve is important.

510. And, as the Commissioner told us, there are two elements to enter into it, the acuteness of the curve and the speed?—Yes.

511. You have told us that it is 4·75 actually?—Between 4¾ and 5; some of it is 5.

512. Now has that super-elevation been altered since the accident?—No.

513. You are quite certain there was no alteration; the line has been relaid since?—Oh, no; only 22 new sleepers put in; the ones that were cut we put in new.

514. Did you superintend that yourself?—Yes, I was there all day after the accident.

515. If it was said the super-elevation was increased that would be untrue?—Yes, it is the same all through; I took levels on it with a level and staff accurately, and took the difference between the two rails.

516. Did you take any level before taking off the metals to relay?—No, after.

517. That is the important thing; when you were relaying the line what standard did you take for your super-elevation?—There was no necessity; the line was not disturbed, except the end of the sleepers broken; these were taken up and new ones substituted.

518. But in putting in the new sleepers packing had to take place?—Yes.

519. When you commenced to work you did not at all measure the super-elevation?—I carefully examined the line the very first thing when I went out that morning.

520. Now I would like to get this thing technically accurate; you understand it better than anyone I could put up as a witness. When you commenced to relay the line you did not take the super-elevation before you commenced the work?—I did not.

521. Then when you laid the rails again you took the super-elevation?—Yes.

522. Upon what basis did you take the super-elevation, then; what did you want to regulate it by; what standard?—I wanted to see that the line was properly laid.

523. But according to what standard?—I do not quite understand.

524. What super-elevation had you to put on?—The proper super-elevation was 4·68, and I put on 4¾.

525. And you regulated that the super-elevation should be all right when you finished, but you did not concern yourself with any inquiry as to what the super-elevation was when you commenced the work?—No, I was more employed in getting the waggons off the road.

526. (*Major Marindin.*) Can you state that the super-elevation before the accident was the same as it was after?—Not exactly, because I did not measure it, but I know the place so well that I know there was no change.

527. (*Mr. Harrington.*) Do not go too far that way; I may have evidence of some skilful eyes that were looking on. The unfortunate man who was killed was permanent way inspector?—Yes.

528. Was it within his power to alter the super-elevation?—No, he should come and consult me first.

529. As a matter of fact, do you know, did he ever interfere with the elevation?—He did in another curve that I told you of on the branch line.

530. Have you any written evidence of his coming to seek your sanction?—No, I had a conversation with him only.

531. Did the conversation occur before or after the alteration?—He asked me to allow him to alter the super-elevation on this curve crossing a public road, and I said, "Certainly, you go across it at such a slow speed that it is not necessary."

532. It is the question of the speed; that is all very well if the brake works, but if the train alters its own speed and takes the train and brake and everything else with it.

(*Major Marindin.*) Supposing the super-elevation of that 3 chain curve had been laid and calculated for 40 miles an hour a train going at 5 miles an hour would go over the lower rail; it would have been too high; they must calculate for something over the presumed speed, but not too much over. If they calculated for this runaway speed they would endanger a train that was going at the regulation speed.

(*Mr. Harrington.*) I am not quite sure it would; I think even up to 40 miles an hour it would rest on that.

(*Major Marindin.*) I have known cases where the super-elevation was too much and the accident was attributable to the super-elevation being too great; the engine went over the low rail.

533. (*Mr. Harrington.*) Is it your opinion, can you give us any opinion as to whether the engine toppled over or jumped off; is there anything that would guide you in that position of affairs to the belief as to whether the engine jumped off?—She jumped off the rails undoubtedly.

534. It could not be toppled over?—I know what you mean.

535. What I mean is this, if it were rounding a sharp curve—I will illustrate it; I believe you were kind enough to construct the bicycle track of the Tralee Grounds?—Yes.

536. Which is the admiration of all racing men in the bicycle world; can you tell us what super-elevation you allowed there?—I forget now; I know it is 5 feet high on the outside and the track is 20 feet broad.

537. If this engine was running down at this extraordinary speed and the super-elevation was not sufficient it may topple over instead of jumping off?—Yes, she might if there was not sufficient super-elevation; going at a tremendous speed centrifugal force would throw her over.

538. From the position of the engine or anything else, is there anything in the position of affairs that would lead you to believe that it did not topple over, but jumped off?—There is no mark on the rail where the engine wheel mounted it.

539. Would not that be just as likely to occur through the toppling over as anything else; that was one of the circumstances which led me, probably from my want of knowledge, to assume she toppled over?—One evidence that she did not topple over is that she is lying the other way, turned towards the side of the curve on her left side.

540. But lying upside down?—Unless she turned completely over, and I do not think that is likely to have occurred.

541. The gauge ties seem pretty slack and loose at that point?—Yes, the gauge of the road.

542. Were they loose before?—Yes; the first thing I did was to gauge the road before touching it at all.

(*Major Marindin.*) I do not think you understand Mr. Harrington; the gauge ties; the gauge was slack no doubt round the curve, but your gauge ties Mr. Harrington says.

543. (*Mr. Harrington.*) I believe, as a matter of fact, at a lower point—it is just as an element of consideration with regard to the vigilance over the line—at a lower point below this bridge the regula-

tion gradient is actually departed from?—There is a slack of 1 in 29 further down.

544. Are you sure there is not one of 1 in 26?—Yes. I have the levels; my assistant will prove it.

(*Mr. Peet.*) There is for a length of 70 feet 1 in 26.

545. It does not come within the area of the accident, but when was your attention directed to that?—When the levels were taken.

546 After the accident?—Yes, that is the time I got the level put on it, but I always knew that that was a very steep piece, and it was in my mind to improve it.

547. But for the sake of the public, and when the Board of Trade approved of a gradient of 1 in 30, do not you think it ought to have been improved immediately; can you tell me how long it has existed in that state?—It is a gradual settlement in the bank since the construction of the line; it was laid out originally to 1 in 30.

548. And it has been going and going until it went down to this, so since the construction of the line that gradient was allowed to exist?—The gradient was laid out at 1 in 32.

549. And it is now down to 1 in 26?—A short turn approaching the accommodation bridge.

550. (*Major Marindin.*) The linemen have not kept the line lifted up as it went down?—Yes.

(*Mr. Harrington.*) That is the difficulty; they are not in a position to keep this line in thorough repair.

(*Major Marindin.*) If the number of men Mr. Hickson told us he had on the line was correct there is no reason that a gang should not be able to keep the line properly lifted.

(*Mr. Harrington.*) I think they vary.

551. (*Major Marindin.*) Is there any reason that your gang and inspector of permanent way should not have kept that line lifted?—That particular portion there is no reason why they should not; in fact, I was going to improve that gradient.

552. (*Mr. Harrington.*) This is one of the engines taken over from the contractor?—Yes.

553. Had been in work with the contractor for a long time?—During the construction of the line.

554. Do you know of your own knowledge that there was a division of the board as to the taking over of this engine, and some of the directors opposed the taking over as being unsafe?—No, there was nothing of that sort as far as I recollect at the meeting. What was said was that the contractor should put the engine in perfect repair before the board would take them over; the contractor offered to pay the money to do this and let the board do it themselves.

555. (*Mr. Adams.*) Was that accepted?—Yes.

556. (*Mr. Harrington.*) And it was done locally here whatever changes were done?—There were men brought over from Leeds, and outside fitters got to do these repairs to this engine at different times.

557. That was not immediately after the taking over of the line?—The repairs had been going on from time to time at different times since the taking over of the line.

558. Am I correct in saying that these men were brought over from Leeds 12 months after the line was opened?—I cannot say when they were brought over, but I know they were over doing work.

559. As a matter of fact you know something about the differences at the board; do you know that Mr. Hussey voted against the taking of them?—I cannot recollect.

560. Or Captain De Moleyns?—I cannot say about that.

561. Do you know they expressed an opinion against it?—I know they were opposed to taking over the engines in the conditions in which they were.

562. In what condition were they?—The condition in which you will find any engine after a contractor has been using it.

563. What sum, let us come to something definite, what sum did the contractor allow for the repairs of the engine?

564. (*Mr. Adams.*) Of this engine?—I cannot say for that engine; Mr. McCowen, I think, has it.

(*Mr. McCowen.*) There was no particular amount put on each engine.

(*Mr. Harrington.*) I only want to set you on the track of an inquiry of this kind; it is really not a subject for me to go fully into, but I assume you will want to get definitely from the company the amount they got for the repair of the engine, and the amount they expended on it.

(*Major Marindin.*) I will want evidence as to the state of the engine; it does not matter what they spent on it; I shall be able to calculate for myself whether it was a suitable engine or not.

(*Mr. Harrington.*) I have no doubt of that; all I want is to set you on the track. While Mr. McCowen is getting that I will take you to some evidence as to the working of this engine on this particular day. Though we have not this evidence before us, yet it would be more convenient that I might ask a few questions of Mr. Hickson as to the evidence given at the commencement by the man who was on that train.

(*Major Marindin.*) I have not seen a word of that evidence you are anticipating a little. However, I have no objection.

(*Mr. Harrington.*) Yes, because I would have to recall Mr. Hickson, and it is better to ask him a few questions now.

565. You were at the inquest, I believe?—Yes.

566. Did you hear the guard O'Leary examined?—Yes.

567. I want to bring you in contact with a portion of his evidence for the sake of getting an opinion from you. I think it is better I should read this at a little length: "Before reaching Lispole the engine was "slipping for ¾ mile." That was going up the hill?—Yes.

568. "I was on the line throwing sand on the rails before the engine"?—Yes, I heard that.

569. "They stopped at Lispole for five minutes. Approaching Aunascaul there is a curve on the road, and the engine-driver ran very quick, carrying the train 140 yards or more beyond the station. They should stop there to take water, but the great speed prevented them, as the rate of speed approaching the curve was not changed.

"(*A Juror.*) Did you use the hand-brake?—Yes, sir.

"It was no use?—Well, I think it was a little, but at the rate of speed we were getting it could not check her altogether.

"(*Mr. Lowndes.*) Did you try to check her?—Oh, yes, we had to come back to the tank again and remain about ten minutes. I had a conversation with Redshaw. I left the van and went to him, where he was taking water. I told him I should get steam for the vacuum." It is already detailed that the engine-driver had taken the steam from him evidently for the purpose of coming up the hill. "The sense of that is to extend the vacuum to the whole train, because I told him it was necessary to do it through his running through the station, because I expected if the vacuum was on it would not have occurred. Did you say anything about running off the rails?—Not there, but I did at Aunascaul.

"(*Mr. Morphy.*) What did you say about coming off the rails?—I told him were it not for the road being right, and the points made, we would run off the rails." That is before they came to Camp, the top of the decline: "He refused to extend the vacuum to the "train, and I refused to travel and told him I would "go no further, and then he agreed to give me the "vacuum."

(*Mr. Haggard.*) I do not like to interrupt, but as we will have this man here, and he will be examined, one of the next witnesses, I think it is inconvenient going back on a newspaper report of what his evidence is.

(*Major Marindin.*) Mr Harrington wants to ask some question grounded on this evidence.

570. (*Mr. Harrington.*) I want to read this portion of the evidence and ask one question on it. You

recollect that part of the evidence; it is substantially correct ?—Yes.

571. I only want to ask you one thing, summing up the whole thing. "(*A Juror.*) Did he give you any reason for refusing to give the vacuum? I asked him why he came so quick to the curve, and he said it was on account of the greasy rail. It would not have happened, said I, if the vacuum was on. No, said he, it is no good at all on this occasion. It is usual to have it always, I know I should have it at all times. He consented to give it, and we started on, it being then about half-past two." He was asked had he a record, and he said, "No, he lost his book in the disaster." "We ran until we came to a standstill opposite Bob Moriarty's."

(*Mr. Huggard.*) Now, I think we are going too far. The reason I would interfere is that I do not believe this newspaper report is correct at all.

572. (*Mr. Harrington.*) Let us have it from the witness, did you hear that ?—I heard the drift of that evidence.

(*Major Marindin.*) Could you not ground your question, whether he remembers what the guard said, and if he does.

(*Mr. Harrington.*) But for convenience I was reading it, assuming the witness would stop me.

(*Mr. Adams.*) We have seen sufficiently what the passage is, do you ask him any question now?

(*Mr. Harrington.*) I have not read sufficient for the witness to enable him to answer the question.

(*Mr. Adams.*) Then it is a good deal better to let Mr. Harrington go on, if the newspaper report is inaccurate it can be amended.

(*Mr. Harrington.*) I want to ask him one question grounded on this evidence whether the brake was efficient: "We ran until we came to a standstill opposite Bob Moriarty's, where the engine slipped for a long time, and he said it was necessary to back into the station again. We did back in and the train came across the hill all right."

Now this is the part I want specially to direct your attention to: "We came slowly, he had very little stopping; about 200 yards this side of the hotel the engine again came to a standstill, and he was trying to start, and she was going backwards and forwards for nearly half-an-hour. He used run a length of metal and back again."

573. Did you hear that portion ?—I did. "We moved slowly until we arrived at the first crossing on the country road the other side of Annascaul." Evidently they stopped there. "All the jobbers got out of the train, I could not say why we stopped there, but we remained ten minutes. Some of the passengers said they would get cars, and some said they wanted refreshments, but I used influence with a man from the town, saying, 'Bring back the passengers, and you will find we will get on all right.' They all came back again and got into the train, but before we started Mr. Redshaw came to me and he said:—'What is the best to be done?' I asked him what was the matter, and he made no answer, but jumped down and examined the motions all round, and got up again, and shortly got off and said:—'I cannot put her either back or forward now.'"

(*Witness.*) I did not hear that portion of the evidence.

(*Mr. Huggard.*) Or anybody else.

(*Mr. Adams.*) It would be very well at this stage if any controversy should arise, and which I see may arise, if we had the coroner's depositions in court.

(*Mr. Morphy.*) That was undoubtedly said at the inquest.

(*Mr. Adams.*) Now if someone would kindly communicate with the coroner, because the depositions are read over and signed by the witness.

(*Mr. Harrington.*) On that assumption, without delaying you, now taking all that I have read, I will read one or two lines further: "I thought he looked very excited and troubled and fatigued, and the Sergeant of Annascaul was standing and looking on." It would be very important if we could have that sergeant; he was not at the inquest. "I told him the man was getting discouraged, or there was something wrong with either him or the engine. After a few minutes more we moved the train and started away. I think we had a few other stops, but I quite forget where. I am sure we had. We had one after passing Emalough Station. There is a pretty stiff incline there, and we stopped half-way up. I got out of the van and went up to Mr. Redshaw, and he said:—'If you agree with me to cut off the vacuum, it is quite unnecessary for you to have it, there is no necessity for you to have it until we reach the top of Glen-na-galt.' We had some discussion, and he said:—'I cannot get up to the top of the hill unless you agree to do it.' And I did agree. I refused to take it off until we got to the level, and I did take it off there, and we had no other stop until we got to the top of Glen-na-galt."

574. Now assuming there is only a per-centage of truth in that, do you think anybody reading it would believe that the engine and brake were in working order that morning ?—They would certainly appear not to be.

575. (*Major Marindin.*) Engine and brake ?—The brake was splendid, and the hand brake in perfect order.

576. (*Mr. Harrington.*) I put all that condition of things described by that man to you as evidence that it was impossible to stop that engine running down the hill; he had no power over it, whether it was failure of brake or steam, where it failed to drag the engine up the hill, it equally failed to stop it.

(*Major Marindin.*) I think the whole of the evidence of the guard that you read out may show that the engine was incompetent to draw the train up the hill, but there is nothing whatever to show the brake was out of order.

(*Mr. Harrington.*) If the engine was incompetent from any cause to draw it up the hill, not being overweighted, what I want to put before you is this, that the same incapacity which affected it in coming up the hill, affected it in coming down.

(*Major Marindin.*) Not necessarily. It appears to me that the driver, finding he could not pull the train up the hill, shut off this small ejector, which he ought to have kept running by the rules all the time in order to save all the steam he could and give him more power going up the hill, that would not prevent him from recreating his vacuum when he got to the top. I do not say that the brake was in order, we have not had the evidence yet, but that does not show it was out of order.

577. (*Mr. Harrington.*) I see that he was required to have 18 inches of vacuum at that particular point at the top of the hill, and I believe he is supposed by your rules to examine all the brakes before starting over the incline ?—Yes, at the top of the hill in cattle trains you are supposed to pin down a certain number of waggons before going down the hill.

578. The length of flat at the top of the hill is very small ?—It is not a great distance.

579. It was not sufficient to cover the train ?—I think so, I think it could stand on it.

580. Considering that 18 inches is the standard, would 17 inches render it inefficient ?—Oh, no; 15 inches on that train was a good vacuum.

581. For this particular decline ?—Yes, 15 inches is a good vacuum.

582. (*Mr. O'Reardon.*) As regards this resurrected bolt, if that bolt struck the flange of a wheel, would there not be a cut or a nick in the bolt ?—If the driving wheel struck it, it would cut the bolt.

583. The bogie would touch it first, if it went over it, it would cut it, and there is no cut ?—There is only the bend in it.

584. (*Mr. Morphy.*) I represented the next-of-kin of the driver at the coroner's inquest, and I put forward two propositions, which I think were proved at the inquest; it will be for you to judge whether

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there is anything in them or not. First of all, Mr. Hickson, when the train was going down that gradient towards Camp Bridge it would be necessary, in order to make the vacuum brake effective, that it should be intermittently applied?—Yes.

585. It would not be effective or safe to put it on and not touch it again until they went over the curve?—No, the proper way to use it is to apply it and then take it off, and apply it again to create that vacuum.

586. When the vacuum brake is put on by the driver is there not an indicator in the guard's van to show it is on?—Yes, there is a gauge.

587. And then the guard puts on his?—No, he is not supposed to touch his brake; he sees the amount of vacuum indicated by the gauge.

588. Is it not usual that he puts it on when the driver puts his on?—No.

589. Did you hear the guard swear that he put on the lever behind when he was going down hill?—Yes.

590. Did you hear him swear that he could not remember whether he ever took that lever off?—I saw it in the report. I did not hear that evidence.

(*Mr. Horgan.*) He swore nothing of the sort.

(*Mr. Morphy.*) I was at the inquest throughout, and there was a good deal of discussion on the point.

591. (*To witness.*) At all events you heard a rumour he did swear it?

(*Major Marindin.*) Do not let us have rumours.

(*Mr. Morphy.*) It is material in order to get at the truth that we should have what took place at the inquest, because I would not be surprised if the guard unsaid now all he said then.

(*Mr. Horgan.*) You have no right to say that of a man who saved all the people's lives

(*Major Marindin.*) I have nothing to say to the evidence given at the inquest; it is the evidence given before me; if it turns out the guard's evidence is totally different before me to what it was before the coroner Mr. Harrington's questions will fall to the ground.

(*Mr. Harrington.*) The guard is all right.

(*Mr. Adams.*) It is quite plain we must have the depositions; we cannot again have any newspaper referred to.

592. (*Mr. Morphy.*) Did you hear a man named Talbot, who was in the van with the guard, examined at the inquest?—I heard part of his examination.

(*Mr. Horgan.*) I object to giving secondary evidence of what Talbot swore.

(*Major Marindin.*) Mr. Morphy is only asking on the assumption that somebody did say something.

(*Mr. Morphy.*) Mr. Adams will say whether the question is regular. This is evidence given at a judicial inquiry.

(*Mr. Adams.*) Assuming Talbot said so and so.

593. (*Mr. Morphy.*) Did you hear Talbot swear that the guard when he put on the brake did not take it off again?—I did not hear it, but I saw it in the paper.

594. If the guard had not removed the lever to take the brake off is it not possible that that vacuum would have exhausted itself before the train came to the curve, and that the driver would be powerless to put the vacuum on again?—It would deprive the driver of the power to create a fresh vacuum.

595. And using the brake effectively?—Yes.

(*Major Marindin.*) That is on the assumption that the whole vacuum escaped before he got to the bottom of three miles.

596. (*Mr. Morphy.*) Yes, it is very possible and probable, considering all we know about this railway. I asked you some other questions at the inquest about your brake vans. This was not a brake van in the ordinary sense at all at the rear of this train?—No, it was only a guard's van.

597. With a brake put on for ornament?—With a brake put on for use.

598. What was the tare weight of the van?—3 tons 15 cwt.; no, 2 tons 15 cwt.

599. The weight of the engine was how much?—28 ton.

600. Do you consider that going down that gradient it would be necessary or useful to have a brake van of a greater weight behind?—It would be useful.

601. And do you believe that really a brake van of 2 tons 15 cwt. with this ornamental hand brake was of any use at all behind?—It was not for the purpose of braking the train; it was to close the vacuum.

(*Major Marindin.*) Supposing the vacuum brake had been inoperative, a light van behind would not be much use; supposing the brake was operative all through the train, it would not matter whether the van was a light one or a heavy one.

602. (*Mr. Morphy.*) But supposing it was inoperative, would not a heavier brake van then be desirable. Do not you even think that going down that gradient for security sake it would be desirable to have two brake vans on?—I do not think so with the vacuum brake all through the train and working; the lighter your train the better.

603. For the purpose of avoiding all risk, because there is tremendous danger going down that hill; would it not have been better, and added towards saving the train, if you had a heavy brake van on that would have caused some cohesion to the rails?—As a general rule it would be a good thing to have a heavy brake van.

604. You have not made inquiry as to the tare weight of other brake vans used on other light railways in Ireland?—I have not made any inquiries. I consider a brake van to be any use should be 8 or 10 tons weight.

605. Why was not this 8 or 10 tons?—Because it was not used as a brake van.

(*Major Marindin.*) You can hardly expect Mr. Hickson to answer that. He is not reponsible for the brake vans.

606. (*Mr. Morphy.*) I believe there are other brake vans used by the company?—Third-class carriages with a brake at the end.

607. Are they not heavier?—Yes.

608. And this is the lightest you had?—This was a guard's van with a brake in it.

609. (*Mr. Horgan.*) You had known the guard when he was with your company before it was taken over?—I believe he was with the contractor, but I did not know him until he was taken over by us. He was with Mr. Worthington.

610. At any rate, he was in your employment since the line was opened for traffic?—Some time after.

611. And during that whole time you found him an active, steady, sober man?—I did. I always found him doing his business very carefully.

612. Never got a reprimand?—I think not, not from me.

613. He got promotion?—He got promotion.

614. And never was fined one shilling?—Not that I know of.

615. With regard to this vacuum this man knew perfectly well how to use the vacuum?—He got his instructions, and ought to have known how to use it.

616. He went on the line repeatedly before, and drove this engine repeatedly before?—No; he acted as guard.

617. And worked the continuous vacuum?—He had his gauge in the van; I do not think he touched it before, or had occasion to touch it.

618. Should he not have touched it coming down Glen-na-galt?—No

(*Major Marindin.*) The guard has no business to work the vacuum brake except in a case of emergency. The valve in the guard's van is so constructed that when the driver applies his brake full power the valve opens of itself automatically; but the guard should not open this unless the driver applies the brakes so far, and then he can assist him by opening the valve himself.

619. (*Mr. Horgan.*) At any rate he knew how to work the register?—Yes.

620. And it is plain there to be seen to work?—Yes.

621. I believe it does not register more than 30 inches?—25 or 30.

622. And anybody can see that from the gauge?—Yes.

623. There is no difficulty in working that in an emergency?—Turn a handle from one side to the other.

624. Anybody with fair experience can do it?—Certainly.

625. So far as you know the continuous vacuum was in perfect working order?—Yes.

626. Could you not see that even after the accident?—You could see where the brakes were and the pistons and cylinders.

627. This engine was a very old one?—No, the same age as the other ones; she had gone through the same work, 1888.

628. It was brought by Mr. Worthington?—Yes.

629. And you do not know how old it was before that?—She was new.

630. I believe one of those trains ran away before, a ballast train ran down this before?—Yes.

631. When was that?—It was shortly after the line opened.

632. (*Mr. Adams.*) After the contractor gave it over?—Yes.

633. (*Mr. Horgan.*) How far did it go down?—It came down to the Junction Station.

634. (*Major Marindin.*) Right over the viaduct?—Yes, it came from the top of the hill down into the station.

635. (*Mr. Horgan.*) Control was lost completely?—Only for a short distance.

636. A most dangerous distance?—Yes.

637. The most dangerous distance on any line in the empire?

(*Major Marindin.*) You must not assume that.

(*Mr. Horgan.*) I suppose it was the merest accident that somebody was not killed then.

638. (*Mr. Adams.*) When did that thing about the ballast train happen?—Shortly after the line opened.

(*Mr. Horgan.*) It was opened in March 1891, and some time after that this ballast train ran down.

639. (*Major Marindin.*) We better get this finished. Where did it commence to run away from, where did it run to, and how fast do you calculate it ran?—The ballast train was loaded at the top of the mountain, and instead of bringing the train down with the engine in front the driver let the train drop down in front of him, and the vacuum was not connected with his engine, and the train got a little the better of him for a while.

640. When did it commence to get the better of him?—About half-way down hill.

641. And what was the speed going over the viaduct?—About 30 miles an hour; the driver is here.

642. (*Mr. Horgan.*) It went past the station?—It went just through the station.

643. Was it not the merest accident that that unfortunate man was not killed?

644. (*Major Marindin.*) Was this fitted throughout with the vacuum brake?—There were two waggons next the engine had not the vacuum on, if he had been at the other end of the train he would have had the vacuum on all the train except the two last. His orders were to go round the train and go to the other end and get in front of the train, and he did not do it.

645. Were the waggon brakes down?—Yes, some of them.

646. (*Mr. Horgan.*) Was any provision made then that a recurrence of this should not take place?—Certainly, the engine should always come down in front of the train.

647. What was the cause of its running then?—I do not know.

648. You said, I think, a while ago that any engine-driver may run down this incline at the rate of 29 miles an hour?—I did not say that. I said you would be quite safe in coming down at 10 or 12 miles an hour.

649. You knew Graves?—Yes.

650. He was an experienced engine-driver?—He was.

651. I am glad you admit that; he was in your service a length of time?—He was.

652. A year and a half?—I do not know.

653. Graves swears distinctly——

(*Major Marindin.*) Where?

(*Mr. Horgan.*) I have it here.

(*Major Marindin.*) Where does he swear it?

654. (*Mr. Horgan.*) At the inquest. If Graves swore, and he is, you admit yourself, an experienced engine-driver, that a man may not drive this quicker than five or six miles an hour, do not you think he ought to be able to test its capabilities?—That a man may not?

655. If Graves swears a man may not drive there quicker than five or six miles, do you agree with him?—What is to prevent him driving?

(*Mr. Horgan.*) It would not be safe.

(*Mr. Harrington.*) Five is the regulation, and he said he would not like to undertake it at a greater speed than ten miles.

(*Mr. Horgan.*) I am reading from the *Kerry Evening Post.*

(*Major Marindin.*) Is Graves going to be called?

(*Mr. Horgan.*) "He never lost control of the engine and never drove at a rate of more than five miles an hour."

(*Major Marindin.*) Round that curve?

(*Mr. Horgan.*) No, but down the incline.

(*Major Marindin.*) Round the curve probably, he knew that that was the regulated speed round the curve, and naturally told you he never went faster.

656. (*Mr. Horgan.*) It was according to your own admission going at 40 miles an hour?—That is what I calculated it was going at.

657. And no matter what brakes were on it would be only hit or miss whether it would go round or not?—If the brakes were on I think it would make it more dangerous, because it would run into the curve rigid; I would sooner let the wheels turn going round a curve like that.

658. In your opinion the wheels were not turning at all at the time?—I cannot say that.

659. You say the line had been soaped?—On previous occasions.

660. Was not that long after this ballast train ran away?—Yes.

661. (*Major Marindin.*) That ballast train was not fitted with the automatic brake in working order.

(*Mr. Horgan.*) It was so far as the engine was concerned, and surely the engine could have been stopped?

(*Major Marindin.*) But whether the engine would be competent to stop the whole train is a matter of calculation.

662. (*Mr. Horgan.*) At any rate there was no soap on the line, and there was no complaint of it before this ballast train ran away or long after; when did the soap bubble up?—Mr. Parkes has the report of it.

663. You said last evening that the cause of the accident was the reversal of the engine?

(*Major Marindin.*) I think he said that the reversal of the engine contributed towards it and made it more likely to jump; the cause of the accident he attributed to the high speed.

(*Mr. Horgan.*) The very last question you asked him was what was the cause of the accident, and he said the reversing of the engine and the tightening of the brakes.

(*Mr. Adams.*) I asked the question. He said the reversing of the engine contributed towards; it he did not say it was the sole cause.

664. (*Mr. Horgan.*) You said the engine had jumped off, would not the very fact of the reversal of the engine cause it to jump off?—Yes, if it was reversed at that point.

665. Who must have reversed the engine?—Redshaw.

666. Is it your opinion that the engine having jumped off into the river is mainly attributable to the reversion of the engine?—It all depends at what particular point it was reversed.

667. (*Major Marindin.*) You do not mean if he had been going at five miles an hour and reversed his engine it would have jumped off?—No.

668. You say that the reversal of the engine running at the speed it was caused a jumping of the engine which contributed to the accident?—Yes.

669. (*Mr. Horgan.*) You told the baronies, as well as I remember, before the Grand Jury, that this would not entail an expense of more than 2*d.* in the £?—

(*Mr. Adams.*) We had that already. Everybody knows that at these inquiries the people promoting the line say it will cost nothing.

670. (*Mr. Harrington.*) Do you keep a record of the number of times these engines are returned as going off the line?—I do not keep a record; if there is any accident a record is kept of it.

671. But going off the line has been a matter of frequent occurrence?—No, it is not; at first there were several cases of it and one case lately.

(*Major Marindin.*) Can anybody speak definitely as to the number of times an engine has left the rails?

(*Mr. Adams.*) Is there a book in which all the accidents are recorded?

(*Mr. Parkes.*) The correspondence is filed.

(*Mr. Adams.*) You better make out from that file a list of the accidents.

(*Mr. Parkes.*) I do not think it would be possible to do so now.

(*Mr. Adams.*) Why?

(*Mr. Parkes.*) Because the fact of an engine getting off the road has only occurred once and that is a few Sundays ago.

672. (*Major Marindin.*) I want a list of the occasions on which any of these engines, and particularly this engine, have left the line when running. Get it from your books; have it made out.

(*Mr. Horgan.*) And all the accidents, because we say this line is dangerous to life and property and a nuisance.

(*Major Marindin.*) I do not think it will assist me in the slightest degree in finding out why this engine went off the rails, if I am given a record of somebody coming in collision with a truck somewhere else.

673. (*Mr. Harrington.*) I believe some directors or officials of the Great Southern and Western Co. went an excursion on the line?—They went out part of the way.

674. Was that with a view of getting a working agreement or giving through rates?—I do not know exactly the purpose, I know they were invited to go out, and went out part of the way and came back again.

675. Was this question mooted at the time?—The secretary will be able to tell you.

676. Did you accompany the directors when they went on the line?—I did.

677. (*Mr. Adams.*) How many went out?—Seven or eight, and Mr. Bayly.

678. Surely you must know what they wanted?

679. (*Mr. Harrington.*) Do you know what object they went with?—I think for the purpose of looking over the line and making some arrangement. The secretary will tell you.

680. And as the result of that day out they declined to make the arrangement?—I cannot tell you.

(*Mr. Huggard.*) There are through rates in the ordinary way.

(*Mr. Adams.*) Do they give through tickets for passengers?

(*Mr. McCowen.*) No.

681. (*Mr. Harrington.*) Did anything occur at this particular place, did the brake fail while they were on the line?—I do not think so.

682. No failure of the brake or engine?—No; we went up the hill and came down it, but we had two engines, the second engine had to come down in front of the train.

683. State what happened?

684. (*Mr. Adams.*) Did anything unusual happen?—No.

685. (*Mr. O'Reardon.*) As to the power of these engines, is it a fact that a few Sundays before this accident an engine on the Castlegregory system failed to draw her load?—That is a light engine, only 19 tons.

686. She had to leave portion of her load behind her?—I am not aware.

(*Mr. Adams.*) We cannot go into the Castlegregory system.

687. (*Major Marindin.*) Let us get this thing clear as to the super-elevation. As I understand you, the super-elevation, as it is there now, is calculated for a speed of 20 miles an hour?—Yes.

688. And it amounts to between 4½ and 5 inches?—Yes.

689. And you calculated, I think, 3½ inches, what was that for?—For a different radius of curve, 5 chains.

(*Mr. Harrington.*) I asked the question based on General Hutchinson's report.

690. (*Major Marindin.*) If you calculated that super-elevation for 5 miles an hour it would have been very much less?—Very small.

691. And the fact of the super-elevation being very much greater than it would have been if calculated at 5 miles an hour makes it very improbable that an engine should fly off at a tangent going round the curve.

(*Mr. Huggard.*) Would you ask Mr. Hickson whether there were some rails never moved at all to show that there was no change in the super-elevation.

(*Major Marindin.*) Mr. Hickson showed me on the ground the rails that were moved, and there were some of them that were never moved, and the super-elevation is the same.

(*Mr. Huggard.*) Would you put to Mr. Hickson one question as to Mr. Morphy's point about a heavy brake van, assuming the train had got up to a speed of 10 or 12 miles an hour or more; would not a heavy brake van tend to increase that speed rather than check it?

(*Mr. Adams.*) All these questions are more for Major Marindin.

(*Major Marindin.*) I think you better leave it alone.

(*Mr. Morphy.*) My theory was that if the heavy brake van had been behind it would have prevented the train acquiring that velocity in that distance.

(*Major Marindin.*) Provided the brake did not act.

(*Mr. Morphy.*) Would you mind signing a summons for that witness, Talbot, who will prove the guard tampered with the vacuum. He was examined and made a deposition, but I have no means of compelling him to come.

(*Mr. Adams.*) I am sure he will attend if the police intimate to him that we would be glad to hear him.

Head Constable FRANCIS CUSACK, R.I.C., sworn.

692. (*Mr. Adams.*) Where are you stationed?—In Tralee.

693. When was this accident reported to you?—About half-past 5 on the evening of the occurrence.

694. What hour did it take place?—About a quarter to 5, but it is not in this district it occurred.

695. Did you proceed immediately to the scene of the occurrence?—I left at 6 o'clock; I got a horse and car, and brought a party of men with me, and was on the road by 6 o'clock.

696. What time did you reach Camp?—About half-past 7.

697. There was plenty of light then?—Plenty of light.

698. Did you carefully examine the line?—I examined the line there where the accident occurred and up the gradient for 1½ or 2 miles.

699. Did you find any trace of soap or grease or anything of that kind?—None whatever.

700. Or of any malicious or unlawful tampering with the line?—None whatever.

701. Did you examine the place where the accident itself occurred?—Did you find any trace of a bolt having been laid in an unlawful way across the rails?—I saw no mark on the rails indicating any violent contact, and saw no trace of a bolt.

702. You have been a long time in the force?—22 years.

703. Have you been long in Kerry?—I am going on four years in Kerry.

704. From inquiry you made have you any reason to believe that this accident was caused by any unlawful or malicious action of any person?—I do not believe it was caused by malicious action.

705. (*Mr. Huggard.*) Was there rain that evening before you got out?—There was rain.

706. A good deal of rain that night?—On this hill there was a good deal of rain.

707. And another train had passed?—Another train had passed a portion of it down to the village.

708. (*Mr. Adams.*) If it had been in any way soaped you would expect to get traces of it?—Yes; I walked between the rails.

709. (*Mr. Harrington*). Would you have had anything to do with any reports given from time to time to the constabulary at Annascaul with reference to any outrages on the line?—There are records in the office, and I am sure if wanted the authorities will be happy to give them.

710. And if complaints were made of any outrage there would be a report upon that outrage or any investigation regarding it made in the office?—Certainly there are.

711. Would they pass through your hands?—I saw some of them.

712. With reference to the complaints about the soaping of the line had you any part in the investigation?—I was not here at the time. I was in Killarney for 3½ years.

713. Nothing occurred within your time?—There was a report of a stone on the rails.

714. But about the soap?—That was before my time, and in another district; but if there is any evidence wanted on that point I am sure it will be here.

715. (*Major Marindin*). A stone after the accident?—It was before the accident, but it was a small stone.

716. (*Mr. Harrington.*) A long portion of that line runs along the fence?—This stone was a small one, and I do not think it could be meant to do injury. The stone was placed upon the rails, but I thought it was mere accident. I think it could not be seriously intended; it could not throw a train off the line at all; it was 7 lb weight.

(*Mr. Adams.*) How much a mile did this line cost?

(*Mr. Huggard.*) I think the contractor got something like 3,200*l.* a mile.

(*Mr. Adams.*) Did that include rolling stock?

(*Mr. Huggard.*) It did, everything.

THOMAS O'LEARY was called.

(*Mr. Horgan.*) I may tell you before this man is sworn that his condition is not very perfect since the accident. His head had been very seriously injured, and from my own knowledge, judging from the instructions he has given me, his instruction are not continuous, and at the time his depositions were made at the inquest he was in a very bad condition, and I was not able at the inquest to represent him or anybody else. Dr. Hayes would not allow me to open my mouth.

(*Major Marindin.*) Mr. O'Leary gave evidence before the coroner.

(*Mr. Horgan.*) He was examined, but I am only telling you the man's condition.

(*Major Marindin.*) Are you in a condition to give evidence or not?

(*T. O'Leary.*) I am at present.

(*Major Marindin.*) If you find you are being unduly pressed or nervous——

(*T. O'Leary.*) I do not think I would be able to bear perhaps a hard cross-examination.

(*Major Marindin.*) If you find you are being unduly pressed let me know.

THOMAS O'LEARY sworn.

717. (*Major Marindin.*) How long have you been in the service of this company?—Since they opened the line.

718. What year was that in?—About two years, or something more.

719. Were you in railway service before?—No, except in the contractor's time, I was two years with him.

720. And you have been in the habit of working on the line between Tralee and Dingle, or on the Castlegregory branch?—I worked both of them.

721. On the day of the accident, 22nd of May, what time had you come on duty in the morning?—7 o'clock.

722. How long are your hours of work?—Until 7 o'clock in the evening.

723. That would be your regular day?—Yes.

724. What work did you do in the course of the day?—I did a little business in the yard acting as porter in the morning, and then was sent out to act as guard of the special train from Dingle.

725. You began work in Dingle?—Yes.

726. You live in Dingle?—I live in Tralee. I was not acting as ordinary guard for some time. I had resigned about two months.

727. Why was that?—Through the means of my family being in Tralee I should have to stay the night in Dingle or Castlegregory very often, and I preferred to stay with the family.

728. What were you doing during the two months?—Acting as porter in the yard.

729. On this particular day you were working first of all in the yard?—Yes, sir, at Tralee.

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730. And then you went with a train to Dingle?—Yes, sir; there were two engines attached to the ordinary train, and I went out as a passenger, having nothing to do until coming back with the special.

731. You were sent away from Tralee as a passenger on an ordinary train to which two engines were attached to bring back a special from Dingle?—Yes.

732. What was the engine?—No. 1.

733. When you got to Dingle did you wait there long before you started back again?—We had a few hours' delay; we started about half-past 1 o'clock.

734. Will you tell me how your train was made up?—Engine first.

735. How was the engine running?—With the bogie in front.

736. Then came?—Seven waggons of pigs.

737. Then came after that?—A passenger carriage.

738. An ordinary third-class passenger carriage?—Exactly, and guard's van.

739. What brake had you on the train?—I had a hand brake and vacuum brake.

740. There was another hand brake on the engine?—Oh, yes.

741. And the vacuum brake was working through the whole train, was it?—Yes, but not starting from Dingle.

742. Tell me where were the passengers riding?—The greater portion of them inside in the passenger carriage, and there was about nine persons with me in the van.

743. Was the passenger carriage full?—It was partly full. I do not know any more could get into it or not.

744. Why did you have any people in the van with you?—They told me they had no room in the carriage.

745. You did not look to see?—I saw it was pretty fairly thronged. The station-master is in charge until such time as the train leaves.

746. Supposing there is room for passengers in the carriage, it is irregular for you to have them in the van?—It is irregular.

747. On starting the train in what condition was the vacuum brake?—It was not attached at all.

748. The pipes were coupled on. Have you had a copy of these instructions?—Yes, sir.

749. Do you know them? Is it your duty or is it not to see that, before starting, "at the beginning of each " journey, the train must be examined to see that the " brake fittings are in good working order and tested, " also that the engine and all the vehicles are properly " coupled and in working order"? In this case you did not see that?—I did, and done it, but the engine-driver would not permit it. He told me he should get it cut off.

750. Tell me the reason the train started from Dingle without the vacuum brake being in working order?—I have no reason only what I am telling you.

751. You better tell me what happened at Dingle. Did you speak to the driver?—Oh, yes; I am after telling you the engine-driver came to me and told me he cut off steam. He wanted steam to get up to the top of the mountain. It was unnecessary for me to have it.

752. Did you ask him to put the brake in working order or not?—Certainly, and he said that I did not want it.

753. I think the shortest plan would be if you would slowly describe all the events in the journey as you went up in your own language?—We started from Dingle about half-past one, and approaching Lispole station the engine commenced to slip. It was slipping for about three-quarters of a mile, I got out when it was slipping.

754. That was in the way between Dingle and Lispole?—Yes. I got out of the guard's van, and went over to the engine-driver, and put some sand on the rails to assist the engine from slipping, and he asked me there why I put on the van, why I attached it to the train. I told him that it was none of my business, that the station-master in charge did it, and to see him about it. We started from Lispole again. We arrived into Lispole station and started again all right.

755. At what time?—About 2 o'clock, I think.

756. You have lost your journal?—I have.

757. From your recollection it was about 2 o'clock?—The book was found, but there was no entry in it. I had a slip of paper, but I did not find the slip of paper. We went on all right. Approaching Aunascaul there is a curve and small incline nearing the station, where we usually take water, and we ran past the station there for about 140 yards.

758. Would you tell me, please, is that station on a rising hill?—It is not; it is on the level, but there is an incline coming into it and a little curve. We backed back into the station again to take water. I approached Mr. Redshaw there and told him to extend the vacuum to the whole train, and he said there was no occasion for doing so. I asked him why so, and why did he run round the curve. He said the greasy rail caused it. I said were it not for the road being made and the points in order, we would come off the road, and I told him to extend the vacuum. He said he would not, that there was no occasion for doing so, and so, therefore, I refused to travel, and then he gave me the vacuum.

759. How did he give you the vacuum? Did he blow the vacuum up with his large ejector first?—I could not tell you.

760. However, you got the vacuum?—I got the vacuum at Aunascaul.

761. To how many inches?—Something about 16 inches or so; I have not a right account of how many inches I had there.

762. But he extended it at all events?—We started again, and went about 200 yards from the station, and the engine commenced to slip and come to a standstill, and backed back again into the station, and started fresh again and got beyond the top of this little rise, and about 200 yards from there again the engine commenced to slip. It was going a length of metals, therefore, and coming back again, and he was going that way for half-an-hour starting, and slipping, and darting about the place. Still, we pulled through until he got to a flat crossing at a place called the Mall, a crossing on the road, and the passengers got out there out of the carriage.

763. You were going so slowly?—We were stopped altogether for about half-an-hour, only just moving backwards and forwards, and when he came to a standstill there the passengers got out of the carriage. Some of them said they would go for refreshments, and more said they would go to take cars. However, Mr. Redshaw, the engine-driver, asked me what was best to be done, and then I asked him what was the matter. So he looked at the motions of the engine and also the works inside the footplate, and got down again and made no reply, and after a short time he said: "I cannot put her either backwards or forwards now." There was a sergeant of Aunascaul, he was on patrol duty, just at the scene of the occurrence. I went down to him and spoke a few words to him in connexion with Mr. Redshaw, that he was looking as if he was discouraged. I thought so, the man looked feeble, fatigued from the hardship of working the train along. So very shortly he started again, and I induced the passengers to come back into the carriage.

764. How near is that crossing to Aunascaul?—It could be a mile. We had a few more stops on the journey. I could not exactly tell the identical spots where we did stop, but I know a certain crossing called Emalough, where there is a flag station, and between that and the Tralee side there is a stiff ascent, and we came to a stop about half-way. I got out of the van and went towards him, and asked him what was the matter or what caused the stop. He said: "If you agree with me to cut off the vacuum, " which is unnecessary for you, it will strengthen my " pressure to gain the top of the mountain." Some discussion took place between us. I, perhaps, not agreeing to cut it off. However, I consented. I told him to get out of the incline on to the level and then

I would cut it off, but not until then. So when he moved from the incline on to the level I cut off the vacuum and got all right to the top of the hill.

765. Do you know what time you left Emalough crossing?—I have no account of that. We had no further stop until we got to the top of Glen-na-galt. We stopped there. It is usually done to put down the lever hand-brake of the waggons, so I got out of the van.

766. Is it an order that all the levers on the waggons are to be put down in that place?—Yes, sir, every one of them.

767. And you pinned them down?—Yes, assisted by Bernard Loughlin, the permanent way inspector.

768. On all seven waggons the brakes were put down?—Yes. I went to Mr. Redshaw and asked him if he was prepared to start that I was, and he said, not for a few minutes, that he wanted to inject water into the boiler. So he did not start for about 15 minutes. We started, I having 17 inches of vacuum.

769. When he was standing at the top he blew up the vacuum again?—Oh, yes, he blew the whistle, and in a few minutes started. I thought he started very sharp for the downhill run; there was nothing like the way other men did. I immediately applied my hand brake, and at the same time could see he had his vacuum fully applied.

770. How far was that after you started that you saw that?—It was between 20 and 30 yards.

771. After he had started?—Yes, sir, because we stopped on a slope west of the incline; there is a level before we come to the right steep.

772. He started very quick, and how soon after he started was it that he put the vacuum on?—Immediately.

773. Full power?—Full power.

774. Your dial went down to nothing?—All round, sir. I thought the start quick for a downhill run, and still I expected a check, and I saw it not coming, but it was more increasing; it increased rapidly every moment, and when about 200 yards from there I was thinking that he could not stop, and approaching Skylough gates where there is a crossing on the county road I was fully under the impression he had lost control of the engine, and on that curve after passing the gates I was on the look-out at the right-hand side of the train, and I saw the engine-driver to look back. I put out my hand and signalled to him three times very roughly to check speed.

775. Could you form any idea of what speed you were going at?—At that point it could be 30 miles an hour. The speed increased every moment to terrible rapidity, and I saw flashes of lightning flying from the motions of the engine-darts, sparks of lightning.

776. That would be from the brakes?—I suppose so.

777. That was from the engine wheels?—Yes.

778. As far as the wheels in your own van were concerned, were they skidding?—My opinion is they were skidding. I forgot to tell you that approaching the gates of Skylough I examined the brakes, put it on and took it off, and it was useless, caused no check, none at all; the rate of speed was too great.

779. But still you are convinced the vacuum brake was on?—On all along.

780. Did you do anything to the vaccum brake yourself?—Not at all.

781. You did not touch it?—I did, going into the wreck.

782. How do you mean?—Where we were thrown off the road.

783. But as far as you have got to this point you have not touched your valve?—Not at all; I knew too well the difference of touching a valve going down an incline. There is a village at Camp and we passed that very quick, scarcely I could see the houses, and at once we were brought into the scene of the disaster.

784. Were you looking out at the time the engine left the rails?—Well, I was not, but I could know from the rate of speed we were going that we could never make the curve. I told the passengers at Skylough that we were all done. We expected our fate at any moment; it was a perfect runaway train.

785. You did not see the engine leave the rails?—No.

786. Could not see whether she toppled over or not?—No; only heard the roar and splash in the river. The van was whirled round and came to a standstill at the parapet of the wall. I was dashed against the side. I had the bolt drawn. Another passenger came in contact with me. I do not know whether he was trying to get out. I got out and was thrown about 20 feet to the bottom. I was thrown down the slope. I saw all the passengers in a heap at one end of the carriage, screaming terribly at the time.

787. That is the carriage in front of you that was thrown down at one end?—Yes.

788. Your van did not leave the rails?—No, it remained against the parapet. The passengers in my van went to the help of the others. I ran to get help, and the first I met was a policeman, and I shouted to him that we were all dead. I ran across to find some more.

789. More people to help?—Yes, sir.

790. There, as far as the incident is concerned, your evidence ends. Do you know how many of these passengers in the carriages were injured at all, did you hear?—I did not—the majority.

791. Were any of those in the van with you injured?—There could be nine or more.

792. Were any of them hurt?—There were a few.

793. In what way?—I did not exactly see.

794. What hurt them; were they thrown down?—They were thrown down inside the van. I was thrown down myself and cut.

795. The policeman being there, and you having gone for other assistance, what did you do yourself?—I immediately thought of the 3.30 being due at the time.

796. You thought that the 3.30 was coming behind you?—Yes, sir.

797. What did you do?—I met a little scholar boy on the road, and I handed him a red handkerchief in his hand to keep the county road and check the engine-driver. I had the danger signal. I thought he would check the engine-driver, and I would not trust him with the danger signal.

798. You made your way back along the line?—I did not go far. I had not gone three yards from where the accident took place and I met a boy named Michael Griffin, who was some time in the company's employment and got dismissed for some reason I do not know. I gave him the flag and told him to go along the line. I knew him to be a competent man and the engine-driver would know him, and so he did and stopped the train.

799. Did he go back?—He did.

800. And do you know of your own knowledge he stopped the train?—Yes, about the village of Camp.

801. You know that for a fact?—Yes, I went back afterwards.

802. Please tell me, had your engine-driver a staff?—He had only a ticket.

803. And the engine-driver that came behind you had a staff?—Yes.

804. Are you in the habit of working that line with a staff and ticket?—Yes, sir, working special trains.

805. Are you aware—I do not suppose it has much to do with you—but are you aware that that is entirely opposed to the conditions on which the line is opened; are you aware that the undertaking under which that line is worked is that no tickets shall be used?—I did know it at all.

806. That will be for somebody else to explain. You do not know that tickets are forbidden?—No.

807. Do you know anything about block working yourself?—No.

808. The first time, as I understand you that you

yourself personally touched the brake handle or the valve in your van was very shortly before the accident?—I was going into the wreck.

809. And it would not be true to say you opened this valve and kept it opened all the way down the incline?—I would not do it for all the wealth in England.

810. You know that when the driver applies his brake very suddenly your valve flies out?—Yes, sir; you mean the pin.

811. The valve of your brake?—It flies up immediately.

812. And then did it fall again?—No, it remained up all along.

813. You did not touch it yourself?—Not at all.

814. Have you been in the habit of working with this man Redshaw, driving at all?—Yes, a few times.

815. Have you ever on any other occasion had anything like a runaway?—Never in my life, often brought down heavy trains in the dead of night.

816. At what speed is it customary to go round that curve?—We should go very slow, 4 or 5 miles an hour.

817. What speed is it customary for trains to be running down the incline from this level crossing to Skylough; what speed do trains generally run at between Skylough and Camp?—We could run very close on 12 or 13 miles an hour.

818. And you are convinced in your own mind that that brake was on the whole way down the incline?—Unless he might for a moment take it off and put it on unknown to me when I was looking out.

819. You did not see it?—No. I examined it several times and saw it continually on, and during the time I was examining it I never saw him to touch it.

820. What did you do to your brake just as the train was coming into the wreck?—I caught the lever and took it off and put it on, just directly at the scene.

821. You could not do much with that?—It did not decrease his speed.

822. You had no power over the releasing brake?—I did not intend releasing it, but I do not think it diminished his power for a second.

823. (*Mr. Huggard.*) We are all agreed that this man did his work very admirably so far as he could. Did I understand you to say that at Lispole you had a conversation with Redshaw about the vacuum, and his giving you the vacuum?—Not at Lispole.

824. Was it at Annascaul you said he would not have run past the station if he had the vacuum?—I did say that.

825. And that he replied "no, it is no good at all on this occasion"?—Yes, sir.

826. What did he mean by that?—The greasy rail he meant was the cause of it.

(*Major Marindin.*) Mind you, he had not the brake in use at that time; it was not operating at all. What he meant was that there was no use in having the brake on going up the hill, in which he was greatly mistaken.

827. (*Mr. Huggard.*) I do not think that is so. I think the impression I got from the answer was that the brake would not assist him the rail was so greasy. You had had the vacuum brake on before that time, and it had been taken off at Lispole?—No, I had not the vacuum brake on at all that day until I came to Annascaul.

828. (*Major Marindin.*) Had you not it on the journey to Dingle?—Yes, but I was not in command, I was a passenger.

(*Mr. Harrington.*) And there were two engines on.

829. (*Mr. Huggard.*) As a matter of fact was the rail in a greasy condition this day?—The worst I ever seen in my life during my experience on this line.

830. And I understand your experience is very nearly four years on this line?—Yes, sir.

831. And you never before had a runaway train?—Never.

832. Is it your experience of Redshaw as a driver that he was a competent driver?—I got never any cause to be alarmed about him.

833. Did he frequently drive you?—A few times.

834. And you never had any complaint to make?—No, never during the time he was in the run with me.

835. He was the head man in the company's employment, over the drivers?—Yes, he was the head-man.

836. In fact he had the position of a head driver, I suppose?—I could not tell you that.

837. As far as you could see he always drove his trains properly?—On the occasions he was out with me he did.

838. Could you form any idea as to the period of time it took you from the top of Glen-na-galt to the moment of the accident?—It could be something about four minutes.

839. (*Major Marindin.*) It must be more than that. You were not running 60 miles an hour. You know it is three miles?—That is my opinion.

840. (*Mr. Huggard.*) You say that in your opinion the start was a bit too quick.

841. But when he got 20 or 30 yards beyond the start he applied his vacuum brake?—Immediately after starting his train on the level he applied his vacuum brake.

842. What I want to know is this: assuming that the start was a violent or jerky start, or too quick, did not Redshaw act perfectly properly in your opinion in applying the vacuum at the time he did?—That was his proper place to apply it, but then not to leave it continually on; take it off and put it on would immediately bring the train to a check, but leaving it constantly on was useless.

843. In your opinion if a man applied his brake to the full extent that he could at 20 yards from the start, should not that bring the train to a standstill altogether?—No; from the start he made from the bank it was impossible for him to stop.

844. Was not that on account of the greasy rail?—It would take him some time before he could do so from the hard start he made from the top of the bank, and instead of doing that it went quicker, brought on no check at all.

845. I ask if a man with 18 inches of vacuum shown on your brake?—Not fully 17.

846. Supposing he applies his vacuum to the full extent, should not that in a reasonable distance, 50 yards, bring the train to a complete standstill on an ordinary dry day?—Yes, in certain conditions.

847. Is not the way to account for it this, that the rail was so greasy that it could not hold?—That, added to the start from the top of the bank being too quick, both together acting, he had no chance to stop it.

848. When you say the start was too quick, over what length of ground did it take to get up this start; a man does not start of a sudden quick?—Yes, of a sudden, from the identical spot where he started.

849. How many yards had he gone before he got a speed of 20 miles?—He could have gone very close on a couple of hundred yards.

850. But long before that, according to you, he had put on his brake?—I am telling you where he applied the brake at the start.

851. You must not think I am hostile, I am only wanting to get your ideas?—I am not even suspecting it, and if you did you are welcome to anything you like to say.

852. At any rate, you say no driver could do anything else except apply his brake as Redshaw did?—I will not answer that; other drivers could do other things.

853. I mean to drive properly; you say Redshaw did what was perfectly right in putting on his brake?—Certainly, that was a proper thing to do; but then to work it properly afterwards was another thing.

854. And he had told you that morning he did not put much faith in the vacuum brake on account of the slippery rail?

(*Major Marindin.*) He did not say that at all. He said it was not much use.

(*Mr. Haggard.*) Would not help him at all; it was no good on this occasion, which he interpreted to mean because the rail was slippery.

855. (*Mr. Harrington.*) With reference to this train going out in the morning, I understand that as a matter of fact this engine did not bring out any train in the morning?—No, sir, there were two engines went out attached to the ordinary train.

856. As a matter of fact, those carriages which it had to bring back were not brought out in the morning at all?—No, they were in Dingle.

857. So the journey out of the engine was no test of its condition, its efficiency at all?—I could not tell you that; they might have tested the engine unknown to me.

858. It did not carry the train out?—I suppose it took out portion of the train, there was another engine.

859. (*Major Marindin.*) They were both working probably?—Yes.

860. (*Mr. Harrington.*) Are you aware that that engine had been undergoing repairs on the Saturday night?—No, sir, I am not aware of that. I know nothing of the working of the engines.

861. You acted before as guard of these different trains?—I did.

862. Did you act frequently?—I was on in the ordinary regular run for about twelve months.

863. During that time did you carry a staff?—I always carried the staff on the ordinary trains.

864. Did you ever go on one of these special trains?—I did not go with any special until I resigned being guard, that was the first time I went on specials to my knowledge.

865. Did you go on any special from the time you resigned being guard, which was about two months before; had you gone on specials?—Oh, yes, sir, I had.

866. Can you recollect whether it was your custom to have a ticket and not a staff on these occasions?—Well, the ordinary train——

867. I am not speaking of the ordinary train?—I must speak of it in order to answer the question, in case of a special going from Tralee to Dingle in the morning we would have to send the ordinary train by ticket and leave the staff for the special.

(*Major Marindin.*) I am going to put Mr. Parkes into the box again on that point.

(*Mr. Harrington.*) My attention is directed to a paragraph in Major-General Hutchinson's report. He says the company will also have to give an undertaking as to the proposed method of working the single line, which method is to be the one-engine system, the line being divided into sections with a distinct staff for each section, such staff always to be carried on the engine.

(*Major Marindin.*) I have here the original undertaking given by the company.

868. (*Mr. Harrington.*) You went out as a passenger and not in charge of the ordinary train?—Yes.

869. Do you know in what capacity Mr. Redshaw went out?—I have no idea.

870. Did he travel with you?—No, sir, he did not. He travelled on some one of the engines. He might be driving coming out for all I know.

871. But going out there was at all events another driver with him?—Yes.

872. When you started from Dingle who made up the train?—The porters in Dingle.

873. Not under your directions?—No, sir, but under the station-master's directions.

874. What did you understand was the point of Mr. Redshaw's question to you later on as to why the van was attached, what was his objection to that particular van?—I thought it was thinking it too much load when the engine was slipping.

875. (*Mr. Adams.*) Did you ever see trains going without a van?—Never, sir.

876. (*Mr. Harrington*). You do not know whether his observations might not apply to another van, why there was not a van instead of that?—Yes, he thought the third-class carriage that was on was the guard's van, because in this carriage there is a compartment for a guard.

877. So that there was a van in addition to that?—He thought there were two vans.

878. You knew this No. 1 engine?—I know No. 1 well.

879. You were on the line before it was opened for traffic?—Yes, sir, I was.

880. Could you tell me when you saw No. 1 engine worked before, or when had you taken any journey with it before this day?—I have no memory of it.

881. Can you tell me whether that was the engine attached to the special that you drove before that?—I could not say that.

882. I think you told us that the first place you began to slip at was at Lispole?—Yes, very near to Lispole Station.

883. You slipped, I believe, then for a considerable time?—About three-quarters of a mile.

884. And I believe you told us that you yourself got out to apply sand to the line?—Yes.

885. Can you tell us why the sand was not applied from the engine?—Very often it used, and more times the tubes would not work, but I could not say that that was the fact on this occasion; at least if the tubes were working at that time perfectly I would have had no occasion to put on so much dry sand as I did.

886. I believe it was in your hat you took the sand?—In my hat and hand, every way I could take it.

887. Where did you get the sand?—Out of the fences at the roadside, tough gravel.

888. It was not out of the sandbox on the engine?—No, sir, I could not get up to the box on the engine.

889. (*Major Marindin.*) Are those engines fitted with tubes for sand at both ends?—I do not know.

890. (*Mr. Harrington.*) At Lispole you slipped very considerably?—Yes.

891. Where did you stop next?—At Annascaul.

892. And you have described here that entering Annascaul he ran beyond?—Yes.

893. He was not able to check it evidently?—No, sir.

894. Had he the brake on at that time?—He had not the vacuum brake.

895. I believe there is no question of the sobriety of the poor man who died?—Yes, he was a very sensible man.

896. You saw him yourself with all this terrible struggling up the line?—I did.

897. The engine stopping, starting again, going about the length of a rail, backing again, making another start, stopping half an hour; have you any doubt on your mind that he had no power at all over that engine?—He did not lose any conscious over her there, she did not get out of control of him.

898. How can you account for the fact?—The road was very greasy that day.

899. Do you think the greasy character of the road would account for running a short distance, backing, making an endeavour to run again; do you think the greasy condition of the rails would account for that?—It originated from that, it was from that it came first.

900. How do you account for his telling you that it would not go backwards or forwards, for, remember, it had gone over the greasy partion of the road then?—I was thinking he might not have pressure to release the vacuum at the time properly from the wheels.

901. Did you make him any suggestion?—I did not. I would not be so foolish as to make it to a man of his qualifications, such a great machinist.

902. But you had your own opinion about it?—That was the opinion I formed about it, that he had not sufficient pressure to release the vacuum.

903. That was coming up?—No, but at the flat crossing at the Mall. That was the idea I had that he had not sufficient pressure to take off the brakes.

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904. Did he get that later on?—After a short time he got sufficient power.

905. Supposing he was coming down that steep gradient to the curve, and the same thing occurred as occurred at that level, and he had not sufficient pressure, would all this occur, and the train become unmanageable and run away with him?—He had 17 in. vacuum at the top of the hill. And I consider that was sufficient to bring down the train.

906. What vacuum had he when the accident occurred?—Once the vacuum was on I could not tell the strength of it.

907. (*Major Marindin.*) At the time of coming up the hill he had no vacuum in connexion at all?—He had for a portion of the way between Annascaul and Emalough.

908. But at the place where he was slipping so he had no vacuum?—No.

909. Then after he once applied it at the top of the hill the guard could not tell then what vacuum he had left

910. (*Mr. Harrington.*) Mr. Huggard asked you whether the driver had done all he possibly could. You said other drivers might have done other thing. To your mind was there anything which might have been done to stop the train which was not done?—I could not say that. He may use his own judgment to the best of his ability. It might have been different with other men.

911. (*Mr. Adams.*) Is there anything you can suggest?—There is. I did not see him work the vacuum, release and put on, it was continuously on all along. Still, while I was on the look-out he could do it.

912. (*Mr. O'Reardon.*) In the course of your experience as guard have you ever known a start from the top of Glen-na-galt at such a speed?—Never in my life.

913. (*Mr. Morphy.*) When the driver put on the vacuum brake and started it coming down the gradient, did you then apply the lever behind in your van?—I did not do any such thing.

914. I do not profess to be a great expert in the matter. I may be floundering——

(*Major Marindin.*) He has said distinctly he did not touch it.

(*Witness.*) I am after swearing that over and over again.

915. (*Mr. Morphy.*) Is there such a thing as a lever in your van with the words "brake on" and "brake off"?—Yes.

916. Did you touch that?—No, but at one given point going into the wreck.

917. Did you put it on before starting down?—I did not.

918. Did you swear before the coroner you did?

(*Mr. Adams.*) Where are those depositions?

(*Mr. Morphy.*) Whether they appear on the depositions or not, I am speaking from recollection of my own; the coroner may not have taken them down.

(*Dr. Hayes.*) I did not take all the depositions in full, only what I considered necessary (*depositions produced*).

(*Mr. Morphy.*) Whether it appears or not, I think you will permit me to ask these questions.

(*Mr. Adams.*) The coroner is not doing himself justice in saying he did not take them in full; he has taken an enormous mass. Does it appear in any newspaper report that he said this?

(*Mr. Harrington.*) There is nothing like it. I am afraid there is some confusion about the hand brake.

(*Mr. Morphy.*) He first said it on his direct examination. I am now putting my recollection, and when I proceeded to comment on it, O'Leary saw the pinch of it and tried to retract, but his first statement was backed up afterwards by the statement of James Talbot, who was in the van at the time. Unquestionably he wanted, rightly or wrongly, to get out of a statement I allege he made before the coroner.

(*Mr. Adams.*) Here is his deposition. "I applied the hand brake immediately after we started, when I looked at the gauge I saw he had the vacuum brake on. I found there was no check to the rate of speed, it was only increasing every minute, and when we came to Skylough gate I found he had lost control of her. Approaching the gate there is a curve, and after rounding the curve I signalled to him, and said, 'For the love of God put down the brake,' he could not have heard me. He looked back and made no reply; the speed must have been about 30 miles an hour."

(*Mr. Morphy.*) If it has been omitted from the depositions or reports that would not prevent the matter having been stated, and I only want permission to ask a very few questions on the subject.

(*Mr. Adams.*) Certainly, ask him did he say it.

(*Mr. Morphy.*) If you allow me to state my proposition it is this, that O'Leary made this statement, and if I am wrong in the fact there is no use in bothering the witness about it. He stated below that he put the lever brake on and cannot remember that he ever removed that afterwards. My suggestion is that that would effect the management of the train by the driver.

919. Do you remember Quin being examined before the coroner?—Yes.

920. Do you recollect my asking Quin whether if you had put the lever brake on and had not thought then to move it back, whether that would affect his management of the train. Do you remember my asking Quin that?—I do not remember your asking Quin the question. I have no memory of any questions you asked Quin.

921. Do you mean to say you do not remember that Quin stated that if the guard had put the lever brake on and had not removed it he could not renew the vacuum?—I knew my trade and did it. I am after swearing I never touched my lever handle. I had too much experience.

922. I asked Quin whether if the guard had acted as he said he had acted he would be disabled from moving the train, and directly the driver said he could not renew the vacuum, O'Leary interrupted from the rear of the court, and disputed his statement, clearly showing that he had made the statement originally.

923. (*Mr. Adams.*) Did you say anything from the rear of the court?—I did when I heard you trying to make out that I did not do my duty, because the lever was found open. I did not care how it was found. I would argue the point with you.

924. (*Mr. Morphy.*) Did you hear the driver state that if the lever had been put "brake on" behind, and not afterwards removed, he could not renew the vacuum?—I do not remember and still he could have stated it.

925. If he stated it did you contradict him from the rear of the court?—I did at one time.

926. (*Mr. Adams.*) What did you say?—He was speaking about putting on the lever at the top of the bank, I came up and interrupted him, and said I did not put on the lever.

927 Did you, as a matter of fact, that day when the train was running away, did you touch the lever handle?—I am telling you I did going into the wreck.

928. Did you tell anyone you touched it?—No.

929. (*Mr. Harrington.*) He gave an interview to a newspaper reporter, and he was also examined at the inquest, and on both occasions he said it was the hand brake.

(*Mr. Huggard.*) He certainly swore that it was coming into the curve at the accident that he touched the lever, and he also swore that before the coroner.

930. (*Mr. Horgan.*) You were four years on the line?—I was.

931. And during that time you never got reprimand?—No.

932. And were never fined?—You are after hearing that before.

933. At the time of the wreck you had a great job

to prevent some of those in the van from coming out?—One or two wanted to get out and throw themselves out.

934. Had you to have your hand on the door at the time, and also your eye to the vacuum?—No, I was dashed against the side of the van, I had my left hand on the door, I was after lifting the lever.

935. After that you did not touch the lever?—I was touching eternity by that.

936. If the lever had not been up at that time do you think your van would have gone into the passenger carriage?—I cannot give any opinion as far as that is concerned. I done my best to save my own life and the lives of the passengers.

937. (*Mr. Adams.*) Everyone was perfectly sober, is that so?—The passengers were all perfectly sober that I had in the van.

938. And drink had nothing whatever to do with it?—Not a sign of it.

939. (*Mr. Morphy.*) Would you ask this man whether he was in a state of panic?—I am not out of it yet.

(*Mr. Morphy.*) The object of the question was to lay the foundation for his having forgotten to remove this lever.

(*Mr. Harrington.*) I think the evidence of his going back to meet the coming train is evidence of remarkable self-possession.

(*Major Marindin.*) The man did his duty.

On resuming after an adjournment for lunch.

(*Mr. Huggard.*) Lord Ventry is here. He was on the train one day that the line was soaped, and he will tell you what he knows about it.

(*Major Marindin.*) I think we have pretty strong evidence that there was no soaping on the line on the day in question.

(*Mr. Huggard.*) There is no evidence of soaping on the day of the accident, but there is a suggestion that there was a bolt on the line, and there is some evidence to support that contention, and any other acts of violence that led up to dates before that would certainly be relevant to the matter of malice.

(*Mr. Harrington.*) If you think there is the slightest suggestion that malice could have had anything to do with this accident, of course——

(*Mr. Huggard.*) How can they say that until the inquiry is ended.

(*Mr. Harrington.*) I do not want to restrict the inquiry.

(*Major Marindin.*) It seems to me there can be no doubt that the cause of the accident was the excessive speed of the train at that particular point. You suggest it was the bolt that threw the train off; it would have been a very curious thing if the train ran all down hill and found the bolt to throw it off; it would have been an extraordinary incident. I am perfectly satisfied that if that train was running round that curve at 40 miles an hour the presence of the bolt made no difference; it was bound to go off, bolt or no bolt.

(*Mr. Harrington.*) Unfortunately there is a good deal of friction between the inhabitants of the district and the company, and there is a great deal of complaint on my side as to the manner in which the whole thing was got up and worked. I have tried to keep that away from the purview of your inquiry, and for the sake of producing a better state of things between the people and the company I would urge the company not to introduce this.

(*Major Marindin.*) Mr. Adams and I are of opinion that as far as we have gone there is no evidence of malice on this particular occasion; is it worth while going back on something that may or may not have occurred on previous occasions?

(*Mr. Adams.*) Major Marindin and I are of opinion that up to the present there is no evidence of any malice; if we are to open this further than it has been opened we must rule that former transaction is a matter relevant to this inquiry; we must then hear all the evidence that is offered by the people of the district rebutting it. Having regard to the opinion that we have formed that this was not a malicious injury we must shut it out.

(*Mr. Harrington.*) I do not know whether you glanced at another inquiry held here about the taxes and the rates, and the special facilities given to certain traders, and passes on the line.

(*Mr. Adams.*) We rule now we will not take any evidence as to this soaping of the line.

CLAUDE ELLERKER sworn.

940. (*Mr. Huggard.*) You are one of the fitters in the fitting shop of the company?—Yes.

941. How long have you been here?—About five months.

942. Do you know this engine, No. 1, the engine of the accident?—I do, sir.

943. Were there any repairs done to that engine immediately previous to the accident?—Previous to the accident the brakes were adjusted in the morning previous to going out.

944. (*Major Marindin.*) That is, your brake blocks or leverage?—Yes.

945. (*Mr. Huggard.*) On the Saturday before Whit-Monday did you put some springs on the engine?—I put one spring on.

946. I suppose she was brought into the workshop for that purpose?—She was, and lifted.

947. Lifted off her wheels?—No, to take the tension off the springs. One new spring on the right trailer.

948. And you looked over her to see what else was necessary?—No, I was only in for that one object.

949. And then she did not leave the shop until the Monday morning, and before leaving the brakes were adjusted?—Yes, to the satisfaction of the superintendent.

950. At the inquiry before the coroner you said you travelled on the engine to Dingle and the vacuum brake worked well. Was that the morning of the accident?—It was.

951. We were told by another witness that there were two engines steaming the train to Dingle; is that correct?—Quite correct.

952. (*Major Marindin.*) Was this the leading engine?—Yes, No. 1 was the leading engine.

953. Your engine had vacuum pipes at both ends?—Yes.

954. So that the vacuum was worked by both engines?—Yes.

955. Which engine was in charge of the train?—The leading engine.

956. (*Mr. Huggard.*) Was No. 1 the leading engine going to Dingle?—It was.

957. And you were on the engine?—Yes, the special engine.

958. There was no slipping or falling back or sliding?—Not the slightest.

958*a*. In your opinion was that engine in good working order that day?—It was in good running order.

959. Did you return with that engine?—I returned with the ordinary.

960. (*Major Marindin.*) That came behind it?—Yes.

961. (*Mr. Huggard.*) How long had you known Redshaw?—Since my employment here.

962. Can you say whether he knew how to drive?—Well, as far as I knew; I would not be in a position to say he knew how to drive; as far as I knew he did.

963. Has he driven you?—Yes, once previously.

964. And he appeared to drive well on that occasion?—Oh, yes, with every confidence.

965. Can you say on the journey to Dingle how many pounds of steam did this engine make?—It varied from 110 to 120; she blows off at 125 lbs.

966. And an average of 120 was made on the outward journey?—Yes.

967. That is a very fair average?—A very good average.

968. Is there a practice in the yard of overhauling engines once a fortnight, or at any stated period?—No; when they require it.

969. How far can they overhaul an engine at the workshops in Tralee?—Completely.

970. You must go into detail; of course they cannot make a new engine or boiler there?—They can repair a boiler; that is a very large question to ask; it needs a lot of explanation.

971. (*Major Marindin.*) You can do all running repairs?—Yes, that is right.

972. (*Mr. Huggard.*) I think you were asked it before the coroner's inquest, how far they could repair the flanges of wheels in Tralee?—Not I; still I know what they could do here; they could repair them here as far as turning is concerned; they could not retyre them, and never have attempted to do so to my knowledge. They can turn them in a circle; that is all that is required here since my experience of the company.

973. So far as you know this engine No. 1, was she a good engine, in good working order?—She was in good running order.

974. We are told that the train was 44 tons; would you say she was capable of pulling 44 tons, given a dry rail?

975. (*Mr. Morphy.*) Downhill?—She is capable of pulling 44 tons if she carries a pressure of from 100 to 120 lbs.

976. (*Major Marindin.*) You say you have been here five months in the service?—Close on five months.

977. Where were you before?—In England.

978. What shops were you engaged in?—I was engaged in the East and West India Dock Company at Tilbury Docks as locomotive hydraulic fitter.

979. Do you know the dimensions of this engine?—I could only give them approximately.

980. As to the flanges, when was she last turned out?—I do not think those wheels have been turned to my knowledge since I have been here.

981. Have you any record of when they were turned?—I have not.

982. Have you examined the flanges since the accident?—Yes; I saw the trailing wheels where she had been sliding.

983. Have you examined the flanges whether they were sharp?—No, I only examined the tyres.

984. I would like you to do that and to tell me. The leading wheels are small bogie wheels?—They are not constituted bogie at all.

985. They are a separate pair of wheels; are they radial axle or on a pin?—They are radial axle.

986. Do you know when she was weighed last?—There is no means of weighing engines in this company at all; we have no weighing machine.

987. You do not know how her weights were adjusted?—No, we cannot tell whether one side is heavier or the other.

988. And you cannot tell me where her centre of gravity was?—No, we can only form an opinion from putting adjusting screws equally.

989. Do you think she was a stable engine, a steady engine?—Oh, yes, she was very steady.

990. You were in the train that started behind the train that ran off the line?—Yes.

991. Did you go down and examine her afterwards? No, I ran down directly I heard the noise, and did what I could for the men that were lying there without looking for the engine at all; and when things were a little subdued I had a look at the engine, and found her reversed; the regulator was not opened at all, it was shut.

992. So he had not put on back steam?—No, according to that; but the concussion may have shut that.

993. Do you know much about the working of the brake?—I have a good knowledge of it.

994. Can you tell me the leverage they work at?—About 2 feet from the centre of the brake lever to the centre of the piston or the cylinder.

995. That is hardly the leverage?—The first lever taken into consideration, the one from the centre of the brake lever to the centre of the cylinder is about 2 feet.

996. How much would your piston have to go before it brought the blocks on?—Given one eighth of an inch from the blocks, it would need to come up 3 inches.

997. How far did you set your brakes?—On this engine you can only set one pair of wheels or blocks; there is no adjusting screw between the leading and driving wheels, you can only set the trailing wheels. In the majority of instances there is an adjusting screw between each pair of wheels.

998. On this particular occasion, how far were the brake blocks off the wheels?—They varied, the trailing ones were about one-eighth of an inch, the driving ones about half an inch, and the leading ones one-eighth of an inch. The driving ones wear more than the other two, due to the weight of the connecting rods.

999. As to the carriages, do you know anything about them?—No, there is a carriage examiner for them. You are under a misapprehension about the automatic valve in the van, that does not apply to this company at all.

1000. It is not like an ordinary automatic valve?—No. The atmosphere is let in through the end of a cock, it directs the current of air at right angles to come in, and when you pull it down it will remain so until you put it off, there is no automatic valve.

1001. So that when O'Leary told me that when there was an application of the brake, the valve flew up?—There is no valve at all.

1002. Then he has the application of the brake by turning a handle and not lifting the valve?—Yes.

1003. I shall have to inspect one of those, so that it is not the same as the ordinary automatic?—No, there is no vacuum chamber.

1004. (*Mr. Harrington.*) I observe that you seem rather guarded in the certificate of character you give to this engine; you would not commend it highly as a good engine?—It is a good running engine in good running order.

1005. You would not apply the term good to the engine itself?—When I say the engine it includes everything, boiler and all. I would say it was a good running engine.

1006. Still you would not commit yourself to the expression that it was a good engine?—I think I commit myself when I say a good running engine.

1007. Was it a good engine?—As I said before, it was a good running engine.

1008. (*Major Marindin.*) You would not say it was a first-class passenger engine?—Certainly not.

1009. (*Mr. Harrington.*) You would not like to trust your life a great deal on it?—I have done so.

1010. When?—On various occasions.

1011. You did not trust your life on it back from Dingle that day?—I went out to do repairing work, and if I had done the work I certainly would have trusted my life on it that day.

1012. You were immediately behind?—We were 2½ hours behind. During that time I did my work, what I went out for. I was engaged on my business at the other engine.

1013. You saw it return?—Yes.

1014. How many times did you travel on that engine?—I did not take particular notice, two or three times.

1015. You saw her in the workshop the Saturday before this accident; she was even in the workshop as late as Monday morning?—Yes.

1016. When she was sent into the workshop, was there any requisition, or is it customary to send a requisition with her, anything in writing as to the alterations or repairs necessary to be made?—Not to my knowledge; I was just directed to do a certain class of work.

1017. Verbally directed?—Yes.

1018. There is no written record as to her requirements when she was sent in?—No doubt there would be to the locomotive superintendent.

1019. (*Major Marindin.*) It would be in the Running Shed Book?—I fancy it would be in his own office and books.

(*Mr. McCowen.*) It would not come before me.

1020. (*Mr. Harrington.*) Where will we be able to get this?—From Mr. Parkes.

(*Major Marindin.*) Can you produce anything that was sent in to show what the engine was sent in for?

(*Mr. Parkes.*) I cannot, that was the late Mr. Redshaw's business.

(*Major Marindin.*) Would there be anything among his documents or papers?

(*Mr. Parkes.*) I have searched carefully and cannot find anything beyond a few entries in the Running Shed Book, and the last entry is in last March. She was in two or three days before the 22nd of May, and I cannot find any record of what her requirements then were, or of what was done to her.

(*Major Marindin.*) Who sent her there?

(*Mr. Parkes.*) I think he did, under his orders.

1021. (*Mr. Harrington.*) She was in until this morning; there was an absolute necessity for running her out on the special train. Was she sent in for things that were not completed, and was she sent out before these things were completed? You do not know, as far as you are concerned yourself, how extensive were the repairs for which she was sent in?—No, I do not know what she was sent in for.

1022. You only know what you did to her yourself?—Yes, I know how she stood when she went out.

1023. You have no knowledge of what she was sent in for?—Not the slightest.

1024. Who communicated with you with reference to her?—Mr. Redshaw.

1025. What did he tell you to do?—He told me on Saturday night; she came in on Saturday morning.

1026. Nothing was done until Saturday night?—Just before mid-day he told me to see about getting a new spring, and have a look at the rest to see if they were all right as she was going out special on Monday. I got under her and examined her, and told him that one of the spings required to come down, that the buckle had shifted.

1027. That was an examination by yourself and not by Mr. Redshaw?—What he told me.

1028. Mr. Redshaw did not direct your attention to a spring and say, "Put a spring on," you yourself went to see what was required, and found she required a spring?—Yes. He said to me, "There is one of those "springs wants altering; she wants a new spring; go "under and see which one it is, and see if the others "are all right." I went underneath the engine and examined them with my hammer, and I found one of them required to be replaced. He told me, "You had "better get a couple of men and put a new one in." Saturday being a short day, I had not it finished, and went home, and he sent word for me to come back and finish it as it was going out, I understood, on Sunday. I finished it about half-past 9. I came in on Monday morning, and he told me the brakes required to be adjusted, and under his supervision I adjusted them. It is necessary to get underneath, and have somebody outside, else you would have to come out and see that they were correct, and he stood outside while I was underneath. All I did was a matter of screwing them up to his satisfaction.

1029. On Saturday when the engine was sent in you were told nothing about brakes?—Not the slightest.

1030. When Mr. Redshaw told you the brakes required adjusting, what did he say?—He said, "You will need to adjust those brakes."

1031. What time was that?—Approximately, about half-past 7.

1032. And the engine left the station about what time?—Somewhere about 10 o'clock; it may be 10 minutes past.

1033. He did not draw your attention to what the nature of the adjustment was?—Oh, no.

1034. He left it to yourself to adjust the brakes?—Yes.

1035. What did that adjustment consist of?—In putting blocks close to the wheel so that the piston of the vacuum cylinders will not have to be raised so high until the blocks are close to the wheel.

1036. Was that because they had been worn?—Yes, it is due to the wear.

1037. And you brought them back then, the same blocks?—The same blocks.

1038 How much of an alteration then did that make in the blocks; how far were they from the wheel when you commenced your readjustment, and how near to each wheel did you bring them?—You could only adjust them to one pair of wheels.

1039. You had no power of adjusting them to the others?—Not the slightest.

1040. Did any readjustment at all take place with regard to the others?—They are adjusted equally, but the driving blocks always wear more than the leading and trailing, due to the weight of the connecting rods, and there is no means of bringing those as close as the other pair of wheels, unless there is an adjusting screw between them, which there is not on these engines.

1041. When you made the alteration in the first pair you were able to make no alteration in the others?—Not the slightest.

1042. By adjusting those blocks on the first wheels you made the blocks on the other wheels practically useless?—Not the slightest.

1043. (*Major Marindin.*) What I understand you to mean is this, in some engines, say one pair of wheels has worn more than another pair, you can adjust those, put them all at an equal distance from the wheels, but in this case he must adjust one block, and that will bring the others up to a certain amount; they are all brought up to the same, but still one will be standing further off than the others. The measure of adjustment you can make is the amount on the least worn pair of blocks?—That is quite right.

(*Mr. Harrington.*) It would seem to me as if the evidence of the witness had been pointed to quite a different state of things, and as if, after adjusting blocks for the driving wheels to make them efficient, he had no means of bringing the blocks of the other wheels to bear on the wheels and make them efficient.

(*Mr. Parkes.*) You cannot block one pair without blocking all three because they are connected.

(*Major Marindin.*) Supposing the blocks on one wheel were standing half an inch, and the blocks from another pair were standing one inch off, and he wants to bring them up to a quarter of an inch, he can bring the least worn ones to a quarter of an inch, but that would not bring the others up to be only quarter of an inch off.

1044. (*Mr. Harrington.*) And, therefore, did they not stand a full half-inch away from the driving wheel?—I could not say that; my eye would not be so accurate.

1045. Did they stand away so far that they would not be brought on the driving wheel?—They would be brought on the driving wheel, but not with the same force as the other ones.

1046. They were not so effective?—They could not be so effective as the other ones.

1047. (*Mr. O'Reardon.*) Was not this engine under orders for a thorough overhaul?—Decidedly not.

1048. When would she be in the ordinary course overhauled?—Directly we finished an engine that was in the shed then she was the next engine to be thoroughly overhauled.

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1049. You are aware of that incline at Glen-na-galt?—Yes.

1050. If this engine were going at a speed of 30 miles an hour and were pulled up suddenly by the vacuum brakes, would not that cause a strain on the brakes and make them ineffective?—No, I think not; the only thing it would do it would have a tendency to lift the train.

1051. (*Mr. Morphy.*) Do you remember me asking you a few questions at the inquest?—I do.

1052. Do you remember me asking you about the vacuum brake?—I do not; you asked me very little about the vacuum brake.

1053. Do you remember getting into collision with O'Leary, the guard?—No; you mistake the witness.

1054. (*Mr. Huggard.*) If the brake affected the trailing wheel, would it not be necessary also that the driving wheel would be blocked; are they connected by a connecting rod outside?—Inside.

1055. What we see outside the wheel?—That is not the brake rod.

1056. If one wheel did not turn, the others would not turn?—If one did not turn, none of them could turn.

1057. (*Mr. Harrington.*) Still, if you could put a brake on all it would be better?—Not the slightest doubt that the brake was on all or she would not have skid.

John Downie sworn.

1058. (*Mr. Huggard.*) You are also a fitter employed by the Dingle Company?—I am.

1059. How long have you been with them?—Since November.

1060. And all that time working in the fitting shop or workshop?—Yes.

1061. You know this engine No. 1?—I do.

1062. Can you of your own knowledge say when last that engine got a general overhauling and touching up?—Fully two months ago.

1063. That would be about the beginning of April?—About that time.

1064. Was she brought into the workshop at that time for some days?—She was.

1065. Do you remember what was done to her?—All the rods were taken down, and the brasses were closed and recentred, put up again, and any other little things that was wanted to be done was done to it.

1066. How long was she in the workshop at that time, do you remember?—As near as I can remember she was in about three days; I think it was either three or four days.

1067. When she was turned out that time what condition was she in?—She was considered by Mr. Redshaw, our loco. superintendent, to be in a good condition.

1068. Before an engine was turned out for work, out of the workshop, did Mr. Redshaw inspect it?—Yes.

1069. And in a kind of way pass them as fit for use?—Yes.

1070. Was there any running test applied before they were sent on a journey?—On some occasions there was; they used to run up the line a bit and come back again.

1071. To see whether they came properly out of the workshops?—Yes.

1072. In your opinion this was all right when she left. Do you remember her being in the workshop the Saturday before the accident?—I do.

1073. Had you personally any connexion with her that day?—No, but I was told that she had to be repaired by Mr. Redshaw.

1074. (*Major Marindin.*) Did he tell you what she wanted?—Not at that time; he told me on Monday morning what had to be done to her on Saturday afternoon, in fact I was there when the last witness was working at it.

1075. In a sort of general way you took a look all over the engine yourself?—No, I did not; it was not my place to do that.

1076. (*Mr. Huggard.*) How long have you known Redshaw?—Fully a year I knew him.

1077. Did you know him before he came to Tralee?—I knew him before he came here; he was in Dundalk.

1078. Was Redshaw a competent man?—As far as I knew of him he was.

1079. Had you been working in the same place as he was before you came here?—I was in the Great Northern Company, the same as he was.

1080. So you had been practically working together for a year?—Oh, no; we had not been working together, in the same company, of course.

1081. And at Tralee in the same yard?—Yes.

1082. You had plenty of opportunities of knowing his powers and experience; do you think he was a competent man?—I did.

1083. Have you ever been with him on an engine running?—I was.

1084. When he was driving?—Yes.

1085. Was he a competent driver?—He might be a competent tradesman, but I would not say a competent driver.

1086. Was anything wrong about his driving?—I could not judge a man's driving. I do not drive myself.

(*Mr. Horgan.*) He says he would not say he was a competent driver.

(*Mr. Morphy.*) Because he knows nothing about driving himself.

1086*a*. (*Mr. Huggard.*) If I asked you in the same way whether Quin was a competent driver, you would tell me you knew nothing about it?—Certainly.

1087. (*Mr. Adams.*) We will ask him what he means, whether he does not give an opinion about Redshaw, or whether he has some reason for what he says. Is what you mean you do not know whether Redshaw was a competent driver or not?—Yes, sir; I could not say whether he was a competent driver or not, because I am no judge of drivers myself.

1088. (*Mr. Harrington.*) You were with him some time, at all events, before coming here?—Yes.

1089. During all the time you knew him in the employment of the Great Northern did you ever know him to drive an engine?—I did not.

1090. You never saw him handle or drive an engine for a mile of the road?—No.

1091. Did you ever hear him say he had driven an engine before he came to Kerry?—I have heard him say it, but I did not know that for a fact.

1092. As a matter of fact, do you believe that he did drive an engine before he came to Kerry?—I do not think so.

1093. Perhaps it would not be unfair to ask you was there a doubt generally among the employées as to the wisdom of sending him as an engine-driver; did you hear any doubts expressed or was there any rumour about it?—I could not say was there any doubts, but the rumour was passed once or twice that he should not be there.

1094. (*Mr. Adams.*) I did not catch the nature of that answer?—The rumour was passed once or twice that he was foolish for going out on engines.

1095. (*Mr. Harrington.*) Did not some of the men in the employment on some occasion refuse to go with him because he was in charge of the engine?—I could not say that.

1096. How long have you been at this business fitting?—Eight years and four months.

1097. How long was Mr. Redshaw at it?—I do not know, but as far as I knew he has been at it all his life, since he was able connected with railway work.

1098. Did you ever run an engine yourself?—Certainly not.

1099. It was not a portion of your work?—Not runing an engine.

1100. And I suppose, long as you might be helping in the construction or repairs of an engine, you would require some special training to run it?—I would.

1101. You would not like to undertake it without some special training?—Certainly not.

1102. In addition to that, even if you knew how to run an engine, you would like to know something about the road you took the engine on?—Most decidedly.

1103. You have been over this unfortunate road and have some experience of engines?—Yes.

1104. Now let me ask your opinion about that road as a practical man, whether at this particular curve you would like to run any engine there?—I would not; in fact I never considered myself safe coming round that special turn.

1105. (*Major Marindin.*) At any speed, at five miles an hour?—I have come round there at more than that.

1106. Would you not consider yourself safe coming round there at five miles an hour?—Certainly I would, but at a quick speed I would not.

(*Mr. Harrington.*) We had evidence from Mr. Hickson himself that it was a recognised custom to run down there at a much more rapid pace.

(*Major Marindin.*) It was not quite that.

(*Mr. Huggard.*) Mr. Hickson said he had himself driven round that curve at a qucker pace, but not with any public passenger train.

1107. (*Mr. Harrington.*) You came down that incline before?—I did.

1108. Could you judge at what rate of speed you came down?—We came about 10 or 12 miles an hour round the curve.

1109. (*Mr. Horgan.*) You did not consider Redshaw a competent engine-driver yourself?—I would not consider him a competent driver.

1110. (*Mr. Morphy.*) That is because you had no knowledge of driving?—Because I have no knowledge.

1111. (*Mr. O'Reardon.*) Did you ever hear of the combined position of fitter and engine-driver, of a man holding the dual position?—I have heard of it; I never saw it.

1112. It would be unusual at all events?—It would.

1113. (*Major Marindin.*) There are plenty of drivers have a training in fitters' shop?—Oh, yes; in fact spare drivers are always in fitters' shop.

1114. (*Mr. Adams.*) Did you ever notice anything yourself about Redshaw when driving to lead you to believe he was not a good driver?—No, nothing to lead me to believe he was not a competent man. I was only once on the footplate with him, but he has driven several times.

1115. (*Major Marindin.*) Where were you working before you came to this company?—With the Great Northern Company.

1116. How long were you there?—15 months.

1117. Where were you apprenticed?—In the Cranston Hill Engine Works, Glasgow.

1118. Do you know where Redshaw was apprenticed?—I think he served his time in the Great Northern Company, I am not sure.

1119. Is No. 1 the same pattern as the other engines?—Nos. 1, 2, and 3 are all the one pattern, No. 5 is a different pattern, and No. 4 is a different pattern; it is the lightest engine of the lot.

1120. Which is the newest?—No. 5; she is ½ inch bigger in the cylinder. She has six wheels coupled and two-wheeled bogie at either end.

1121. (*Mr. Huggard.*) When you talk of this feeling about Redshaw driving an engine among the employées you speak of something that has occurred since the accident, when you say there was talk in the shop of it being foolish of Redshaw to have driven an engine, you are talking of something that has happened since the accident?—No, before the accident.

Lieut.-Col. William Rowan sworn.

1122. (*Mr. Huggard.*) You are the chairman of this company?—Yes.

1123. And have been since the inception of it?—Yes.

1124. You remember the appointment of this man Redshaw?—Yes.

1125. He came to you from the Great Northern Company of Ireland?—Yes.

1126. Did he answer the advertisement by letter or appear personally before the board?—He appeared personally before the board and answered by letter also.

1127. Did he bring a testimonial from his late employers?—Yes. Here is one from the Locomotive Department of the Great Northern Railway Company:—"Dear Sir,—Mr. A. T. Redshaw informs me that he intends applying for the situation of working foreman for your railway, and I have much pleasure in giving him any assistance I can. He served his apprenticeship in our works at Dundalk, and has remained in the service ever since he was out of his time. He is a steady industrious young man, and ought to prove suitable for the position.—Yours faithfully, James C. Park."

1128. (*Major Marindin.*) Did the writer of that testimonial know what his position was going to be?—Oh, yes, that he was to be over our locomotive works.

1129. What did you advertise for?—A loco. foreman.

1130. And anything else?—No, not as far as I recollect.

1131. And the reference of this gentleman was as a working foreman?—Yes, to take charge of the locomotive works.

1132. (*Mr. Huggard.*) You considered that coming from the source it did it was a high testimonial?—Yes. This is a letter to Mr. Parkes, the general manager.

1133. Did you, in addition to that, satisfy yourself by a conversation with this unfortunate poor man as to whether he could drive an engine or not?—I asked him would he undertake to drive an engine if required, and he stated he would and was capable of doing so.

1134. Did he state that he had at times driven?—That he had driven engines; I do not think he had ever driven engines as a matter of business, but he had driven them.

1135. We all know that he had never been a driver?—No.

1136. But he had driven in the way locomotive foremen and fitters do drive?—

(*Major Marindin.*) Would you explain what way that is?

(*Mr. Huggard.*) I gather from the evidence I have heard in this case that they do go out frequently to test their own work.

(*Major Marindin.*) Who said that; Elleker, was it?

(*Mr. Huggard.*) There is the evidence of Mr. Parkes that this man had driven 57 times on the line. He had driven officially as driver three times on the Dingle line, 27 times on the Castlegregory branch, but he had also driven another 30 times over the line when he was not officially driver for the purpose of testing brakes and other work.

(*Mr. Harrington.*) I think upon these matters, as there is a question of the competency of this man, we should have more direct evidence than Mr. Parkes, because it was a matter of speculation; he gave a general guess as to 27 times, and spoke of three times. I assume they have a means of testifying by their time-sheets the different times this man went out in charge of an engine.

1137. (*Major Marindin.*) Perhaps Mr. Parkes can give us more definite information on the subject. When the locomotive foreman goes out to test these brakes does he take the engine out himself or have a driver with him?

(*Mr. Parkes.*) He would have a driver with him as a rule, I have known him to take an engine out without a driver.

1138. The practice would be that he would go out on the engine with a driver and see that the work had been properly done?

(*Mr. Parkes.*) Quite so.

1139. (*Mr. Huggard.*) So far as you knew there is no question but that Redshaw was a thoroughly sober man?

(*Mr. Adams.*) Oh, that is admitted.

1140. (*Mr. Huggard.*) So far as he came under your observation was he a competent man for his work?—He was a very intelligent man, and seemed to understand all about an engine, a great deal better than I did of course; but I was continually in the shop and asking questions about everything I could see there, and getting all the information I could from him.

1141. You could give no opinion yourself as to the number of times he drove over the line?—No, I have seen him driving a train in from Dingle and Castlegregory both when I have been at the station, but I never travelled in a train he drove.

1142. (*Mr. Harrington.*) Could you show me the advertisement to which that man replied and on which he got his appointment?—I have not got it.

1143. You are very sparse of documents now, I observe; perhaps someone would get this advertisement.

(*Mr. Adams.*) Is it not admitted that the advertisement was for a locomotive foreman only.

(*Witness.*) That is all.

1144. (*Mr. Harrington.*) You had a conversation with this man as to whether he would undertake to drive an engine, was that after he had been actually engaged?—It was the very day that he was engaged and immediately after.

1145. And I suppose he would have been turned back and would not have got the appointment if he said he would not undertake to drive an engine?—I do not think so; he had been accepted by the board of directors at the time and the board was over.

1146. Am I to understand that this man got charge of engines conveying passengers and was entrusted with the safety of the lives of the people without any questions being ever asked of anybody else except himself as to whether he ever drove an engine?—Yes, that is so.

1147. Neither you nor any of the directors to your knowledge ever made an inquiry before this man brought these engines out with passengers, ever made an inquiry as to whether he drove an engine before he came into your employment?—No, I do not know of any inquiry having ever been made.

1148. You have no letter and no record no testimonial from anybody to you that he ever did drive an engine before coming into the employment of the company?—No.

1149. And as a matter of fact nobody in the employment of the company tested him or examined him in any way as to whether he was competent to manage an engine to your knowledge?—I could not say what Mr. Parkes may have done in that way; I did not.

1150. To your knowledge I asked you, you were chairman of the board, and I assume took upon yourself a greater responsibility because of that position I am sure, and from what I know of you I believe you are not a man to undertake responsibility without attending to it?—Well, I did not examine him.

1151. To your knowledge did anybody, or any member of the board, suggest he should be examined before he would be entrusted with the driving of an engine?—I know that he went over the line with the other drivers first.

1152. On the very day on which he came you asked him whether he would take charge of an engine?—Yes.

1153. Then can you tell us why it was necessary to send another out with him; did you believe that he was a man competent to take charge of an engine?—Certainly, when he told me so; but he was not acquainted with our road until he had been over it. No driver would undertake except in a case of absolute necessity to drive over a strange road.

1154. It was a case of necessity that arose here. On this day when he took charge of the engine for the special train he would either have to take the train or the special could not start?—That is what I have heard. I was not aware he had gone out with the engine until after the accident.

1155. Did your hear the evidence of O'Leary?—I heard portion of it.

1156. You heard of the failure of this engine to come up Lispole incline?—Yes.

1157. You heard of its stopping again at Aunascaul?—Yes.

1158. You heard of the attempts to come up, and of putting sand on the line, and the man walking with his hat full of sand and putting it on the line before him, you heard the evidence of its attempting to go on and backing a little, and slipping and shunting for half an hour?—Yes.

1159. What does that bring to your mind, does it bring to your mind a thorough inefficiency either on the part of the driver or the engine?—I would attribute it to the heavy load and the greasy rail. I have known it occur with other drivers previously.

1160. All that?—All that.

1161. I am taking this extraordinary state of facts, the attempt to go up Lispole, the failure at Aunascaul, the stoppage at the Mall, all the people coming out to take refreshments, and to take cars to drive home. I know if my friend Mr. Hussey was there he would, as I heard him remark, take a car and drive home. Do you think the engine was wholly inefficient?—I think she was overloaded.

1162. Then the overloading which rendered her inefficient coming up the hill precipitated her destruction down?—I think it contributed to it.

1163. Do not you think it caused it?—I suppose so. I cannot tell you whether something may not have occurred to the engine going down which none of us can understand.

1164. Do you remember when this engine was taken over from the contractor?—Yes.

1165. Was there a controversy at the board as to the advisability of taking this engine over?—There was a controversy as to the amount allowed by the contractor for putting them in order.

1166. Did Mr. Hussey, Capt. De Moleyns, and Mr. Slattery oppose the taking over of this engine?—Not this engine specially, but the engines used by the contractor.

1167. He had used all the engines; under his contract he was entitled to use them?—We got one engine since the contractor gave over the line.

1168. (*Major Marindin.*) But all the other engines were contractor's engines?—No. 4 had been very little used by him, the others were.

1169. (*Mr. Harrington.*) Can you tell me whether a division took place at that board on the question?—I cannot.

1170. I suppose the minutes would show whether there was a division?—I do not think it would.

1171. There were four engines taken over?—Yes.

1172. Can you tell me what amount was paid to put those four engines in repair?—I cannot tell you

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altogether, we got over 1,000*l.* altogether from the contractor, but there were other matters besides that.

1173. Is there anybody who can definitely give us the figure that was got for putting the engines in order ?—Repairs are going on from time to time.

1174. (*Mr. Adams.*) Was there not a sum of money paid by the contractor to the company under the contract to put those engines in repair ?—Yes.

1175. What was that sum ?—I cannot tell you the precise figure.

1176. Was that sum of money spent in putting the engines in repair ?—It was and more, but then they were not put in repair immediately. The principal repairs was the turning out of the tyres of the wheels, and that was not done all at once. We got 1,900*l.* altogether, that included supplying some rolling stock that was not supplied.

(*Mr. Adams.*) Mr. McCowen, find out what was the sum paid by the contractor for putting the engines in repair.

(*Mr. McCowen.*) 10*l.* for engine No 1, and 10*l.* for No. 2, repairing and turning wheels, that was all the Great Southern superintendent recommended to have done to the engine. Mr. Ivatts examined the engines and recommended that these works should be done and said the engines were in satisfactory order.

(*Mr. Harrington.*) Have you any written award of that gentleman's ?

(*Mr. McCowen.*) No. He put it in writing, but it would take some time to get it.

1177. (*Mr. Harrington.*) You have heard now, Colonel, that only the sum of 10*l.* was allowed in respect of this particular engine ; there is another matter I want to ask you, the whole burden of the baronial guarantee and the guarantee for the town of Tralee falls upon the occupiers ?—Yes.

1178. (*Mr. Adams.*) Is not that provided for by the Tramway Acts ?—It does not follow the ordinary company cess.

1179. (*Mr. Harrington.*) I draw your attention to a paragraph in General Hutchinson's report : "The steepest gradient has an inclination of 1 in 30, and of gradients between 1 in 30 and 1 in 40 there are on the main line in all about 8 miles, and on the branch line 30 chains. The longest unbroken length of these severe gradients extends for nearly 3 miles, from 10 miles 66 chains to 13 miles 60 chains on the main line. The radius of the sharpest curve on the main line is 4 chains, and on the branch line 5 chains." Now we have it here to-day, and we had it yesterday in evidence of Mr. Hickson, that as a matter of fact the radius at this curve is not 4 chains ?—No, 3 chains.

1180. Would you tell me whether the matter has ever been brought to your notice until we brought it forward at the inquiry here that this radius mentioned is a different radius from what actually exists on the line ?—No, I never noticed it ; but I knew that the radius of the curve was 3 chains, and I knew that General Hutchinson knew it also ; he asked the question on the ground in my presence.

1181. But as a matter of fact in the original report and the copy sent to you 4 chains is given by him as the radius ?—So I heard.

1182. That is a singular discrepancy upon which I say he approved of the curve ?—I was over the line with him and heard him ask the radius of the curve on the ground, and he was told 3 chains.

1183. He goes on to say, "These gradients and curves are authorised by the Orders in Council." Does that convey to your mind that he considered the gradients and curves upon it were both going very far to endanger public life ?—It implied, I presume, they would be better without it.

1184. That expression of disavowal of responsibility for the line goes very far to convey the idea that there was a danger to public safety ?—It implies that it would be better without them.

(*Mr. Adams.*) It speaks for itself.

1185. (*Mr. Harrington.*) You will observe that in the same report, and with the same knowledge in his mind, as I maintain, he fixes the rate of speed at which trains were to descend this slope ; was that rate of speed always maintained, or did it come to your knowledge that it was departed from frequently ?—Not to my knowledge.

1186. You heard it sworn to-day that trains come down at the rate of 10 or 12 miles an hour ?—Yes, it never came down at that rate to my knowledge when I was in the train.

1187. As a matter of fact when you were travelling in the train were you aware at the time that five miles was the pace at which it was regulated to travel there ?—Yes, I was.

1188. And that it should not exceed five miles ?—It should not.

1189. Your company gave an engagement on which General Hutchinson passed the line, an engagement that this should be worked as a single line with a single staff and in sections ; perhaps I might ask you for that engagement ?

(*Major Marindin.*) Yes. I think that is a matter that will require further explanation, the board of Tralee do not allow single lines to be worked with ticket as well as staff unless it is in conjunction with the block, and the original undertaking by this company was that the line should be worked with an engine carrying a staff only. But a letter has been put into my hand to-day, a copy of a letter from the Board of Trade, which I have never seen before. "Referring to your letter of the 30th ult., in connexion with the circular letter from this Department of the 26th ult., I am directed by the Board of Trade to state that in view of the limited number of trains run upon the railway they are advised that an occasional train may be despatched with a ticket, provided that the staff is in every case at the station from which the train is despatched, and further that it has been first ascertained by telegraph that the previous train has cleared the section of the line before the second train is allowed to follow." That is the block system ; that is 13th August 1891. There was some recent correspondence, I understand, about that ?

(*Witness.*) There has, there was a fresh undertaking given lately, which was very much in the terms of that letter, which was not sanctioned.

(*Mr. Huggard.*) It is under consideration at the present moment.

(*Major Marindin.*) I think not.

(*Mr. Harrington.*) They have no means of communicating on this line.

(*Witness.*) We communicate from the junction into Tralee and then out to Dingle.

1190. (*Mr. Harrington.*) You were out on the line after this accident had occurred ?—Yes, I went out the night of the occurrence, and I went out the next morning.

1191. Were you present when the line was being relaid there ?—No.

1192. Did anything come to your knowledge or hearing as to the super-elevation at the curve being in any way altered by the relaying ?—Certainly not, that was one of the points Mr. Hickson and I looked for to see if the rails had been disturbed at all ; there was no depression there and we could find no trace of it.

1193. That is on the assumption that the super-elevation was all right before the accident ?—Yes.

1194. But if my informants were correct in stating the super-elevation was interfered with a considerable time before the accident and had been altered you would not notice it ?—Part of the line had not been altered since the accident ; that was tested yesterday with the part of the line where the new sleepers were put in and the super-elevation was the same.

(*Major Marindin.*) The super-elevation of a great part of the line which was not relaid was almost identical with that further on ; it ran upon from 4¾ to 5.

1195. (*Mr. Harrington.*) It was a portion of the duty of the deceased man, Loughlin, to examine the line ?—Yes.

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1196. Did it come to your knowledge that he had altered the super-elevation of any portion of the line?—No.

1197. You did not learn of it?—Never.

1198. Perhaps it is a matter that would not be reported to the board?—I do not think it would.

1199. We had evidence that with regard to a portion of the line the gradient had become reduced to 1 in 26; did you hear that portion of the evidence?—Yes, I did.

1200. And you heard that that is practically the same since it was taken over by the company?—Yes.

1201. And it has never been reported to you?—I never heard it until yesterday.

1202. (*Mr. Horgan.*) I see it was not with you that Mr. Park was in communication?—It was Mr. Parkes issued the advertisement as general manager of the line, but it came before the board of directors.

1203. Practically, it was Mr. Parkes had the appointment?—No, certainly not; his advice was asked and probably followed, but it was not he made the appointment.

1204. Those who took this man this day had no practical experience of engine driving themselves?—I should think not, I had not; I know.

1205. And you did not test his capabilities in any way, the five directors, who chose this gentleman?—Not that I am aware of.

1206. (*Mr. Morphy.*) Are you aware that none of the directors of the Great Southern and Western Railway are engine-drivers?—I am not aware that they are.

1207. (*Mr. Harrington.*) Had you any other persons applying for this position besides this man?—About 50.

(*Mr. Morphy.*) If you attach at all any importance as to getting at the truth as to the application of the vacuum brake by O'Leary, the guard, I would ask you to examine a shorthand police reporter who took a note of all the proceedings at the inquest.

(*Mr. Adams.*) Oh, I think not, we have looked at the official report and we have the man's own evidence.

(*Mr. Huggard.*) We must ask you not to accept any such evidence.

(*Mr. Morphy hands up to the court the transcript on which he relies.*)

(*Mr. Adams.*) I may close the incident by saying there is nothing in that inconsistent with what he says to-day.

JAMES TALBOT sworn.

1208. (*Mr. Morphy.*) Were you travelling from Dingle that day in the guard's van?—I was.

1209. Do you remember coming to the top of Glenna-galt hill?—I do.

1210. Do you remember being examined before the coroner?—I do.

1211. Do you know what the vacuum brake is in the guard's van?—I do not know anything about them brakes.

1212. Do you know the lever that is shoved back?—There is a brake overhead and one underneath with a wheel in it.

1213. Did you see the guard move the one overhead?—I saw the guard doing his business.

1214. I am afraid you do not remember what you said before the coroner; do you remember saying before the coroner——

(*Mr. Huggard.*) I beg your pardon now, he ought not to lead the witness.

(*Mr. Morphy.*) Lead a witness who is eminently hostile to me.

(*Mr. Adams.*) We do not know about that; go on now.

1215. (*Mr. Morphy.*) Did you swear before the coroner that you saw O'Leary, the guard, immediately after you started down the hill put on the lever vacuum brake, and that he did not move it afterwards?—I do not know about that, sir; I only swore that I saw him putting on the brake at the top of the hill.

1216. (*Mr. Horgan.*) Twisting it?—Yes, that is all I know about it.

1217. (*Major Marindin.*) You saw O'Leary put on the wheel brake?—Yes.

1218. Did you see him touch the other brake?—I do not know any more about it.

1219. (*Mr. Adams.*) Look here, you must answer the question. Did you see him touch the other brake, the one at the top?—I did not.

1220. Did you ever say you did?—I cannot say.

1221. The inquest was only the other day; you better answer straight; did you say at the inquest you saw him touch the other brake?—I was thrown off the box where I was sitting.

1222. Did you say at the inquest that you saw him touch the other brake?—I did not say it; I am not sure, because I did not take any notice of the man what he was doing.

1223. (*Mr. Horgan.*) You do not know any distinction between the hand lever and the vacuum brake?—I was on the outlook for myself because I thought I would be killed every moment.

(*Mr. Adams.*) You have a perfect right to take any memorandum you have there and examine him from it.

1224. (*Mr Horgan.*) About a mile and a half above where the accident occurred did you hear O'Leary crying out to Redshaw for God's sake to check?—I did, sir, and the guard told us it was a runaway.

1225. Did he make every effort to tell him to check the engine?—He did.

1226. By the hand?—He did.

1227. That was at Skylough gates, about 1½ miles above the wreck?—I do not know where it was.

1228. Did he repeatedly make every effort to get the engine-driver to check the train?—He did; he told us she was a runaway train.

1229. At the same time was he looking at the gauge?—He could be. I do not know.

1230. (*Mr. Morphy.*) When you were examined before the coroner did O'Leary come forward and say that you were not telling the truth; do not you remember that well?—I did not hear him.

1231. Since the inquest had you a conversation with O'Leary?—I had not.

1232. (*Mr. Adams.*) When did you notice the train running away?—From the top of the hill.

1233. Was it running away all down the hill?—Yes.

(*Mr. Morphy.*) Would you allow the sergeant to be examined who took the shorthand note?

(*Mr. Adams.*) The way it stands is this, Talbot says that he did not see O'Leary moving the upper lever at all. If there is any competent witness who can contradict upon oath that statement and say that Talbot made another statement at the inquest, if there is such a witness, of course it is for ourselves to judge whether he is telling the truth.

(*Mr. Morphy.*) Of course I cannot control the police unless you ask him.

(*Mr. Adams.*) Well, we will ask the sergeant.

(*Mr. Huggard.*) For the purpose of making a formal objection I would submit that it is not fair to the company that you should receive evidence in this court which would not be evidence in any court of law. It is probable that the questions that are now being discussed here to-day will be discussed immediately in the near future before a judge and jury in an entirely different court, and it is perfectly plain to anybody that the object that my friend, Mr. Morphy, has in getting in this side-wind evidence to-day is to make a lever for getting it in another court.

(*Mr. Adams.*) We are not bound by the ordinary rules of evidence at all. This is a court of inquiry, and we are bound to get at the truth by the best light we can. But I entirely disagree with your view that this would not be evidence in an ordinary court of justice; you can always contradict any witness by proving he said something relevant to the issue, opposite to what he says now, at some other time. That has been done over and over again.

Sergeant James John Noble sworn.

1234. (*Mr. Adams.*) Are you a reasonably competent shorthand writer?—Of 10 years' experience.

1235. You heard this man Talbot examined?—Yes.

1236. Were you present when he was examined on oath before the coroner?—I was.

1237. Did you take a note of his evidence?—I did.

1238. Have you any statement made by him with reference to the guard, confine yourself to that?—"After passing Skylough O'Leary made the statement, "he said he had no control over the train," he means the driver, "and that she was going mad. I saw him "put on the vacuum brake, he left that on too; I did "not see him remove it; he must have lost his head." Mr. Morphy then asked him:—"How far were you "away from the curve of the bridge when you saw "the guard put on the vacuum brake?—Nearly a "mile, sir."

1239. (*Mr. Harrington.*) Who suggested the words "vacuum brake?"—He was examined by the coroner, it was in answer to the coroner he gave that. A juror asked him then:—"Could he take it off unknown to you?" He answered, "He could not. I was sitting alongside it."

(*Mr. Harrington.*) That shows it was the hand brake he meant.

(*Major Marindin.*) How is this brake handle placed?

(*Mr. Parkes.*) At the end about 6 feet from the ground.

(*Major Marindin.*) What is the pillar brake?

(*Mr. Parkes.*) It is the horizontal screw about 18 inches below that.

(*Major Marindin.*) Where is that in respect to the guard's seat?

(*Mr. Parkes.*) Close beside it.

(*Mr. Morphy.*) Ask has the sergeant any personal recollection of what O'Leary swore before the coroner?

(*Major Marindin.*) I understood that the transcript of the note was put in and handed up to Mr. Adams, and he said he did not see anything incompatible with what he swore to-day, and that closed it.

1240. (*Mr. Morphy.*) Did you hear O'Leary come up at the inquest and contradict Talbot, and say he was not swearing the truth?—I could not swear that from memory.

(*Mr. Adams.*) We have now down what you ask, and it is for us to say what meaning and what value we attach to it.

(*Mr. Huggard.*) Now will you take the newspaper report of what the guard said, the "Kerry Weekly Reporter?"

(*Mr. Adams.*) Even the "Weekly Reporter" is not evidence in a court of justice.

John O'Donnell sworn.

1241. (*Major Marindin.*) How long have you been in the service of the company?—About two years.

1242. What are you?—A ganger.

1243. Of what length, where does your length of line begin and end?—Ten and three-quarter miles, to the 16th mile-post.

1244. Ten and three-quarter miles is just the other side of the bridge where the accident happened?—On the Tralee side of the bridge.

1245. Then the part where the train ran off, is that under you?—Yes.

1246. How many men have you got in your gang? Three.

1247. How often do you walk over it?—About three times a week.

1248. You do not walk it every day?—Sometimes.

1249. What is your order about that; are you not ordered to walk it once a day?—It is walked every morning by one of the men. I walk some of it myself, too.

1250. Three times a week, and the other days one of your gang walks it?—Yes.

1251. Were you over it the morning of the accident yourself?—Yes.

1252. At what time were you at Camp?—After the accident.

1253. No, but before the accident?—Oh, yes, I walked it in the morning.

1254. At what time were you at this place where the accident happened?—About 6 o'clock.

1255. What was the state of the line then, was it in good order?—Yes, sir, it was.

1256. When was the last time before the accident that you did any work to that part of the line?—About a week before.

1257. What did you do at that place?—I did not do much to it; it did not require it.

1258. What did you do to it?—Just only to pull it.

1259. Pulling curves right?—Yes.

1260. And you left it in good order?—Yes.

1261. When had you the gauge on it last?—I tried the gauge on it too.

1261*a*. At that same time?—Yes.

1262. When you heard of the accident where were you?—I was about a mile and a half from the place to the west.

1263. You came back to it, I suppose?—I did.

1264. And saw what had happened?—Yes.

1265. Did you make an examination of the line?—Yes, I did.

1266. Did you find anything to account for the train having left the rails?—No.

1267. Was there anything in the nature of an obstruction to the line?—I did not see it.

1268. Was the curve in proper order?—Yes.

1269. Did you try the cant on it?—Yes.

1270. What is the cant on it?—Over 3 inches.

1271. Did you examine the line in the direction of Dingle at all, walk up the line?—I did not examine the line ahead of it.

1272. That was not your bit of line?—It was.

1273. Is not the 10¾ post close to the bridge?—Yes.

1274. You have nothing to do with the line beyond that?—Yes, to the 16th.

1275. Oh, I beg your pardon, yes, the actual point that the train left the rails was not on your length?—It was.

(*Mr. Horgan.*) He takes in the whole bridge and takes in the whole incline.

1276. (*Major Marindin.*) Did you walk it up?—I walked it up in the morning, and came down that way in the evening.

1277. Did you see anything in the shape of grease or anything on the line?—No.

1278. Did you see anything to indicate that the driver had put sand on the rails?—No, sir, I could not see anything.

1279. What was the state of the rail?—It was very greasy.

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1280. (*Mr. Harrington.*) What age are you?—About 20.

1281. That might mean a couple of years more or less, as nearly as you can guess, John, what age are you?—Begor, I could not exactly tell.

1282. So that the ganger that has charge of all this line from the company, and that is supposed to have applied gauges and all these things could not tell his own age. Are you 18 years of age?—I think I am about 20.

1283. (*Major Marindin.*) Where were you born; are you a native of this part?—No, sir.

1284. Where were you born?—Camp.

1285. (*Mr. Harrington.*) Where do you live?—Camp.

1286. Now you saw some work made at the angle, the curve going round the bridge a short time before the accident?—Yes.

1287. Who was at that work; was Mr. Hickson there?—Before the accident, is it?

1288. Before this accident occurred, a couple of days before, there was some work carried on just at the bridge?—No, sir, I did not see it.

(*Major Marindin.*) What he said was that about a week before the accident he worked at this place, and I understood what he did was the ordinary lifting work.

1289. (*Mr. Harrington.*) Was anybody with you?—Yes, there was the men.

1290. What men were with you working?—There were two men from Annascaul and a man from Camp.

1291. Was Loughlin with you?—No.

1292. Was Mr. Hickson?—No.

1293. What were you doing there?—Just pulling it and looking after it.

1319. What wages have you from the line?—16*s.*

1294. Who was in charge was it you were in charge of the gang?—Yes.

1295. You do not know what you were doing?

(*Major Marindin.*) It is quite intelligible.

1296. (*Mr. Harrington.*) You said something about applying the gauge; do you know what is meant by the cant of a line?—I do.

1297. What cant was there when you were working there?—About 3½ inches.

1298. Did you measure that yourself ever?—Yes.

1299. How is it at present?—About the same.

1300. Are you sure it was not changed; where you there when the track was being relaid?—There was no change made in it only to put in sleepers.

1301. Would you be surprised to hear it is 5¾?

(*Major Marindin.*) No, 4¾, there is nothing over 5.

1302. (*Mr. Harrington.*) Would you be surprised to find it was that?—No answer.

1303. Were you in charge of the gang?—Yes, sir.

1304. And are all the others younger than you?—No, sir.

1305. Are they older?—Yes.

1306. Who ought to walk this line in the morning?—I walked it that morning myself.

1307. I want to know whose duty was it to walk it; was there anybody whose duty was to walk it every morning?—Yes, a man that comes from Annascaul side.

1308. And he comes down to his work?—Until he meets us where we are working.

1309. Is he responsible for walking the whole line every morning?—No, he is responsible only to walk as far as we are working.

1310. From the bridge up to meet the man who comes from Annascaul who does the walking up the line?—I walk it myself.

1311. Every morning?—Yes, sir.

1312. You did not say that a while ago?—I walk it every morning; what the other man does not walk I walk.

1313. Why did you say you went over it three times a week?—For the whole length.

1314. You do that six miles three times a week?—Yes, sir.

1315. Where were you working when the train came down that day?—About quarter of a mile over the top of the hill.

1316. Did you see the train coming up there?—I did.

1317. Did you see it stop at the top of the hill?—No, sir.

1318–9. And you did not notice anything the matter with the train coming up?—No, it came up just the same as any other train.

JOHN DRISCOLL sworn.

1320. (*Major Marindin.*) What are you?—Gateman at Skylough.

1321. How long have you been there?—Last April two years.

1322. What is your duty?—To have the gates open, lowering the signal and have a hand signal.

1323. On the day of the accident where were you when the train passed?—I was at the gate.

1324. You saw it pass?—I saw it coming to the top of the hill. I was inside in the cottage watching it from the window I saw it coming to the top of the hill and stopping there for some time, a quarter of an hour, it might be more or less, and I was watching it closely until it started. I saw some slack steam round the engine for a bit, then it puffed up steam the same as usual. I did not notice anything. I pushed to one side to have the gates open. I saw no change in it, and then it got into the turn, and I could not see it until it got close to the gate, and from what I saw of it I could not see that there was anything wrong.

1325. What speed would you think it was running at?—I could not say, I am no judge of that; but when it came to the gate it passed me pretty fast.

1326. Did it pass you faster than trains usually run?—I do not think a train with such a heavy load passed me so fast. I think lighter trains have passed nearly as fast.

1327. Did you notice any of the men working the train as it passed you?—I do not remember. The guard was at the other side; I could not see him.

1328. Did you see either of the men on the engine?—I forget, I do not think I did.

1329. You could not tell me what they were doing?—I could not account.

1330. The engine was not steaming, the steam was off?—I could not say.

1331. Do you know anything about the brakes, were they on or off?—I do not know anything about that, I do not understand it.

1332. (*Mr. Harrington.*) Trains come down there usually at a good smart pace?—It is not alike they come every time, sometimes they come pretty smart, and sometimes slow.

1333. You could form an opinion what five miles an hour would be, a good fast walk?—Yes, sir.

1334. Do you often see them coming down faster than that?

(*Major Marindin.*) That is not the point; they would be entitled to go 12 miles at that.

(*Mr. Harrington.*) There is a crossing at this place where he is restricted to five miles an hour.

(*Mr. Huggard.*) At this particular place he would be entitled to go 25 miles because it is protected from the road.

(*Mr. Harrington.*) "At the oblique crossings of all roads when approached on the level or on a falling gradient," 5 miles an hour.

(*Mr. Huggard.*) That applies to the tramway portion of the line; this is the railway portion.

(*Major Marindin.*) Immediately at this side of it he would be entitled to go 12 miles an hour.

(*Mr. Harrington.*) Yes, the company seems to think they have a right to go down hill at 25 miles an hour.

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(*Mr. Huggard.*) We say this is not an oblique road crossing at all.

(*Major Marindin.*) They are clearly bound to be running only 12 at this side of it.

(*Mr. Huggard.*) We say as a rule we never run more than 12, but by law we are entitled to go 25.

(*Mr Harrington.*) It would be really a matter for public safety to have that set right, because this is a case of a company and its officials contending that are not bound to pull up at that particular point.

(*Major Marindin.*) What is the mileage of that crossing?

(*Mr. Harrington.*) About 12½ to 13.

(*Major Marindin.*) We can look into that afterwards.

(*Mr. Harrington.*) If that is an oblique crossing they have been disobeying the law.

(*Major Marindin.*) You read the undertaking as only applying to oblique crossings on the tramway line.

(*Mr. Huggard.*) That is what we do say.

(*Mr. Harrington.*) I maintain it is oblique crossings on any part of the line.

(*Major Marindin.*) According to the wording of the instructions you are perfectly right, but I am inclined to think it was not intended where the line was fenced off from the road by a proper gate.

1335. (*Mr. Harrington.*) You noticed, at all events, that it was going pretty fast. I think you said to some friend you would not like to be on that?—I did; there was a neighbour of mine inside, he said it came pretty fast, and I said I would not like to be on the engine, I meant before the waggons as the rails were so slippy.

1336. The neighbour inside appeared to agree with you that he would not like either to be on it?—He did not say a word about it, it was I myself said it, and we were talking afterwards and he said he saw trains to go faster, he counted all the waggons out through the window of the cottage.

1337. But you said you would not like to be on it at all events?—Honestly I said I would not like to be on the engine.

THOMAS REARDEN sworn.

1338. (*Mr. Horgan.*) You were in this train?—I was.

1339. Coming from Dingle?—Yes.

1340. You were at the fair of Dingle?—Yes.

1341. Buying pigs?—Yes.

1342. Had you any experience in railway business before that?—I had. I was 13 months working on the Waterford and Limerick Railway.

1343. Had you any experience as to the vacuum brake and the hand brake?—I had.

1344. You know the working of it?—I do.

1345. (*Major Marindin.*) What were you working as?—As a special guard often.

1346. (*Mr. Horgan.*) You were in the van with O'Leary?—I was.

1347. And seven or eight more?—I think there were ten.

1348. Now when you came as far as Aunascaul you remember the train ran past?—She ran nearly 300 yards past the station.

1349. What was the cause of that as far as you could see?—I thought the man had no control of his engine.

1350. (*Major Marindin.*) The vacuum brake was not working then?—No, sir.

1351. (*Mr. Horgan.*) Did you hear O'Leary say that only for the points were fixed?—He did. I told him only for the points being settled by the stationmaster we were killed.

1352. (*Major Marindin.*) What points are those?—The points going into the station off the main road; if they had not been set we would have been off the road; he should have stopped 20 or 25 yards before he came to the station to take water.

1353. The signal was right for you?—Yes.

1354. And if the points were not right the signal would not be right?—Yes.

1355. (*Mr. Horgan.*) So far back as Aunascaul you charged him with having no control over his engine?—I spoke to O'Leary and he made the remark to me that the man came down too quick; there was a little hill there.

1356. You know when you come to the top of the hill at Glen-na-galt, did you see the vacuum brake put on?—I did.

1357. When?—After he started.

1358. Before he came to the top?—He had no vacuum on before he came to the top.

1359. (*Major Marindin.*) As I understand it, he had not got the vacuum brake in working order as far as this place, Aunascaul, after that the vacuum brake was put into working order?—It was put into working order for a short distance; he stopped nearly five times before he came to the top of the hill, and it was put off.

1360. And then he went to the top of the hill without the brake?—Yes.

1361. (*Mr. Horgan.*) Did this man O'Leary put on the lever of the vacuum brake going up the hill?—He did not go near it good or bad.

1362. You remember then when he came to the top of the hill?—I do.

1363. Were the brakes put on then?—They were; he went out himself and put them on; he put on the brakes in the waggons first; I was looking out of the window, himself and the man that was killed, Loughlin, went out and put on the brakes, he put on his own hand brake then. We went down the hill, and he turned to us and said, "We are going very quick."

1364. Did you observe a quick start?—I did. He turned back and said, "That is a quick start." "It is," said I. We were going away quick enough, and when we came to Skylough gates—I know them well—there was two of us and Ned Slattery, we put on a hand-brake, and there is a screw below at the end of it, every time you pull it there is a screw catches the brake and holds it tight; we went down and put it on as tight as we could. We never went near the vacuum break, or he, until we came to Camp, and we nearly found the van running on the sleepers after the engine going over the bridge before he put his hand to the vacuum brake, and then he put on the vacuum brake.

1365. So that at any rate if anybody swore that he put on the lever?—I do not think there was anyone in the carriage bar myself that understood it.

1366. (*Mr. Morphy.*) You had experience in the Waterford and Limerick Railway?—I had a little.

1367. For how long?—13 months.

1368. Was that the whole time you were in their employment?—Yes.

1369. And from being a common labourer or pig jobber you were promoted to be a guard?—I am a tradesman—I am a pig jobber and a victualler.

1370. And you were guard of a train?—I was for a while.

1371. Do the two things generally go together, guard and pig jobber?—Four things altogether.

1372. What train did you act as guard to, was it a mail train?—A goods train.

1373. On your oath, is there a vacuum brake on one of the goods trains of the Waterford and Limerick Railway?—No, I acknowledge that.

1374. And you come up here and pretend to have a knowledge of vacuum brakes?—I have seen them on engines.

1375. And you thoroughly understand the mechanism of them?—Yes.

1376. Is it by air or steam that the brake is applied?—By steam usually, and there are more of them worked by air.

1377. Do you know which it was in this case?—By air.

1378. You were not at all disturbed going down hill that day?—I was.

1379. Did not O'Leary tell you to go down on your knees?—He told the people alongside me.

1380. You thought there was no necessity for your going on your knees?—I did, more than anyone else, but I was knocked down. I had my head out of the window.

1381. And although your head was out of the window?—I had an eye out of the window when I found it going too quick. I had to take it in because I could not keep it out in the latter end.

1382. Do you mean to say O'Leary could not have interfered with the vacuum brake?—I can swear he did not.

(*Mr. Morphy.*) Well, it is for the court to say whether they believe you.

(*Major Marindin.*) I believe him most thoroughly, and I do not see any reason why there should be an imputation cast on him.

(*Witness.*) I am telling the truth. I do not care whether I am believed or not. You can do what you you like with me.

1383. (*Mr. Harrington.*) Coming up Lispole Hill you found this engine slipping?—They generally slip coming up the hill.

1384. After leaving Aunascaul there were a series of attempts and slipping?—He slipped several times and had to go backwards.

1385. He had to give a little jerk, and he had to go back 200 yards to give it a run?—I think more.

1386. That is apart altogether from backing into the station at Aunascaul?—Apart from that. At another place he had to back more than 200 yards for a run.

1387. From all you saw, and the experience you had of engines coming up that hill, was the engine or the man unmanageable?—Someone must be in fault. I was in every train going to Dingle since the narrow gauge ran. I do not think I missed a fair in Dingle or Castlegregory or Camp, and I never saw the man driving before.

1388. (*Mr. Adams.*) Did you ever see anything going on like that that went on that day?—We had to make two halves of a train another day coming from Dingle, and he had to come back for the rest of them.

1389. (*Major Marindin.*) What engine was that?—It was the best engine they had by all accounts.

1390. (*Mr. Harrington.*) Was it No. 1?—It was not.

1391. You told me you have been at every fair that was in Dingle since the line was constructed?—I think every fair since the train ran.

1392. And you went by that train, and you never saw this engine-driver driving before?—Never saw him, and I was in every fair in Castlegregory, with the exception of one or two.

(*Mr. Morphy.*) On a rather immaterial matter I have just got a telegram from the father of unfortunate Redshaw: "Parke's evidence in 'Times' report "shows my son to have been five years in Great "Northern Railway service, but he was 11 years "there."

The inquiry was adjourned to next day.

Friday, June 9th, 1893.

The inquiry was resumed at half-past 10 o'clock on June 9th.

(*Mr. Horgan.*) I propose with your permission to examine Mr. Graves, the former engine driver?

(*Major Marindin.*) There are other witnesses to be examined first.

(*Mr. Horgan.*) I take the liberty of handing in to you the report of Mr. Hynes, the Grand Jury auditor. He says:—"The contractor for the line was bound "under the terms of his contract to supply carriages "of all kinds, 70, engines, 4. By returns issued by "the company up to 30th November 1891 he has "only supplied 47."

(*Mr. Adams.*) Forty-seven, what?

(*Mr. Horgan.*) Carriages, and he was bound to supply 70.

(*Mr. Adams.*) That would rather arise on a general inquiry into the line; what has that to do with the accident?

(*Mr. Horgan.*) I was thinking you would make the inquiry a primitive one so that we could get relieved of the burden by the Government?

(*Major Marindin.*) I am afraid that is beyond my reference.

(*Mr. Horgan.*) If we get a loan of 50,000*l.* or 60,000*l.* and make a good line of it, we would not want a grant if we got it repayable at 2,000*l.* a year, like the seed loan, we would be all right.

(*Major Marindin.*) I am afraid that is beyond the scope of this inquiry; if you want any such inquiry it will be for you to apply to have it held, but this inquiry is into the causes and circumstances attending this accident, and Mr. Adams and I decide we must confine it to that particular reference.

Constable JAMES McDONALD, R.I.C., sworn.

1393. (*Major Marindin.*) What are you?—A police constable stationed at Camp.

1394. Where were you when this accident happened?—I was within 350 yards of the bridge, the scene of the accident.

1395. On the road?—Yes.

1396. Now, will you tell me, please, in your own language what you saw?—Well, sir, I was proceeding in the direction of Castlegregory Junction to attend the train, as I was about 350 yards below this bridge my attention was attracted by the terrible noise of the train.

1397. Was it then in sight?—It was not in sight because a wood intervened, but immediately as it passed the wood the noise came directly to me; the noise was terrific. I turned suddenly round and instantly I saw the train dash over the bridge at the side of the bridge furthest from me; the crash was tremendous, it was like a roll of thunder. I ran immediately back and I met the guard O'Leary, he said, "We are all dead."

1398. Where was O'Leary, the guard?—He was coming down to meet me from the bridge.

1399. Off the line?—Off the line on the public road. He said, "We are all dead," and he passed me by. I ran up to the scene and ran to the engine. At a glance I saw that the three men that were on the engine were lying under the cab, which was detached from the engine, the engine was lying on its side, and the cab was lying at the wheels and the three men underneath. I tried to lift the cab off them, but I was not able and there was no help. Then I caught the men and tried to pull them out, but I was not able; they were caught tight. When I saw I could not help them I thought I might go to the other side and lend some help. I went to the carriages and helped to pull some of the men out. Then I ran back to the engine and by this time help had arrived, and I lifted the cab and pulled three men out.

1400. Were they dead?—They were alive. Redshaw was alive and lived for about ten minutes. I cleaned and washed his mouth and helped him as well as I could, and he died in about ten minutes. O'Loughlin appeared to be bad, but after reviving him with a drink he got better, and I put him sitting up against a bank; his intestines were protruding and he was terribly mutilated. He was very sensible and spoke consciously; he asked for the priest, he told me his leg was broken, and he inquired about the accident, and asked did she come off the rails. Dillon was in a bad state. I washed him and took the dirt out of his mouth, and rubbed his arms, which seemed to relieve him, and he worked as if in convulsions.

1401. How long was it after the accident before the cab was lifted off them?—It was hardly five minutes.

1402. Did you say some of the men spoke to you? —None, but O'Loughlin, he was very conscious.

1403. Did O'Loughlin say anything which would throw any light on what happened?—No, sir, he seemed to be rather inquiring about it than giving information.

1404. None of them seemed to be able to give any information?—No, sir; in fact I had not much time to listen as I was running about trying to get help.

(*Mr. Harrington.*) He seemed to ask had the train gone off the line?

1405. (*Major Marindin.*) Quite so. Where was the train when you first saw it?—When I first saw it it was immediately going over the bridge, when I turned round it was dashing over the bridge. A wood intervened, but immediately it came out of the wood I could see it, either on the bridge or about 20 yards from the bridge, but I did not see it until it was on the bridge.

1406. What was the sort of noise?—Like a roll of thunder.

1407. Very rapid running of the train?—Yes.

1408. Did you hear any noise of steam?—Yes, sir.

1409. Are you sure of that?—I am, sir.

1410. You are sure you heard the roar of steam from the engine?—The engine was standing in the river when I went up, steaming frightfully.

1411. And yet the regulator was shut?—I could not see whether there was steam on the bridge because it was in the twinkling of an eye I saw it over.

1412. Can you say whether there was steam escaping from the funnel of the engine as it approached?—I could not, because when I looked the engine had gone over the bridge and it was only the carriages.

1413. And the steam in the river may have been from the broken tubes?—Yes.

(*Mr. Huggard.*) In the depositions of the coroner before you there is the evidence of a man named Darcy, which I would suggest you should read as he is not here.

1414. (*Major Marindin.*) Where is he?—He was in company with me walking down the road.

1415. What is he?—He is a school teacher in Dingle.

(*Major Marindin.*) I think for my own technical examination it is very necessary that I should have a train made up almost as this train was made up and try a few experiments. I have made up my mind to remain here and take possession of the line on Sunday and make experiments.

(*Mr. Harrington.*) There was another disaster yesterday.

(*Mr. Horgan.*) We wish the Board of Trade had possession of it altogether.

(Mr. Harrington reads a newspaper report of the evidence of William Darcy at the inquest. He also called attention to the heading. "The Kerry Disaster: Soap on the Line," which appeared in the *Dublin Evening Herald.*)

1416. (*Mr. Horgan.*) How long are you stationed in Camp?—Since September or October last.

1417. How many accidents have occurred on the line since you came there?—I do not know.

1418. How many cattle were killed?—There were some cattle.

(*Major Marindin.*) Never mind cattle.

1419. (*Mr. Horgan.*) Are not people very uneasy about travelling on this particular portion of the line? —I do not know the feelings of other individuals.

1420. As far as you know?—I think they are.

(*Major Marindin.*) I do not think we can go into the general feeling.

1421. (*Mr. Harrington.*) I might ask him whether the line is not considered very dangerous at this particular point?—As far as myself is concerned I think the curve dangerous.

1422. I am sure you would rather walk into town than take that train if you were not compelled?—I would not; I would chance it at all events.

(*Mr. Harrington.*) There is one thing, everybody commends the constable for the assistance he gave on that occasion.

(*Mr. Huggard.*) There is no doubt about it this man behaved splendidly.

1423. (*Major Marindin.*) You have seen several trains pass, I suppose?—Yes.

1424. Can you form any estimate as to the speed at which they have come down that incline?—I am not in a position to answer that.

1425. You can perhaps say whether they are in the habit of coming round that curve much faster than you can walk?—They generally come round very slowly.

1426. In approaching it how fast do they run?—They generally come slowly down the hill.

SINGLETON GOODWIN, C.E., sworn.

1427. (*Mr. Huggard.*) I understand you were at Castlegregory this day, and returning home on foot?—Yes.

1428. About what point of the road were you at when you saw the Dingle train approaching?—About two or three miles from the junction on the Castlegregory branch.

1429. Where first did you see the Dingle train?—I saw it coming round the level crossing at Skylough.

1430. Of course it was in motion when you saw it? —Yes.

1431. It had left the top of the hill coming on?—Yes.

1432. You were, I suppose, almost immediately underneath it?—I was about a mile in a direct line from it.

1433. Did you notice anything unusual?—I frequently have seen trains coming down from the same point, and certainly, though I did not take much notice of it, it struck me that it was coming much quicker than they usually come. At that point they generally appear to be going when you are down below like at a snail's pace almost; this train was going very much quicker.

1434. Did it strike you at the time that it was going too fast?—No, I thought it was going very fast for a loaded train, but it did not occur to me to follow its motion.

1435. (*Major Marindin.*) You were not alarmed? —No, not a bit alarmed because I had seen trains going as fast.

1436. (*Mr. Huggard.*) Did you have a conversation with Mr. McGinn about picking it up at the

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junction ?—Yes, we were wet, and he remarked we might pick it up at the junction. I said there was no chance of picking it up, as it might either wait for a passenger train or go straight into town, and we thought no more about it.

1437. You have seen trains going as quick ?—Yes, I should say as quick.

1438. How far did you follow the train's progress with your eye ?—I could see it very nearly the whole way down.

1439. How far did you ?—I do not think I looked after it for more than a quarter of a mile, and then I saw no more of it; I just looked up casually.

1440. (*Mr. Huggard.*) Your eye could follow it very nearly into the village of Camp ?—Yes, the only thing that struck me as extraordinary was that it did not seem to me to reach the junction. When it reaches the junction there is generally a lot of steam and shunting and whistling, and I was surprised I did not hear it.

1441. (*Major Marindin.*) Did you hear of the accident ?—Oh, yes, I went up immediately.

1442. (*Mr. Huggard.*) Did you hear any whistling of the engine as it went down the hill ?—I have an idea that I heard whistling at Camp, but it did not strike me as anything particular; one often hears that.

1443. (*Major Marindin.*) There was no continuous whistling ?—No.

1444. (*Mr. Huggard.*) Is the distance from Skylough gates to where the accident occurred 1½ miles? —It is, or 1¾.

1445. If the train were going at the rate of 40 miles an hour it would take something over two minutes to traverse that distance ?—Between two and three minutes.

1446. Have you any experience yourself of engines or engine driving ?—No, I have not, I have a very superficial knowledge.

1447. If a train were going down hill, suppose 12 miles an hour, what distance do you think would be a reasonable distance for stopping it, given its brakes in good order ?—It ought to be stopped in 100 yards at 12 miles an hour.

1448. What I want to come at is the whole space of time from Skylough gate was only two minutes; what space of time would it take to stop a train going 20 miles an hour down an incline ? Do you yourself know whether there is such a thing as a greasy rail ?—I am very familiar with the expression. I have had no unpleasant experience of it. I think I have seen trains skidding.

1449. You are not talking of this line ?—Not in particular.

1450. I believe it is a well-known thing in the tunnel going into the city of Cork ?—A greasy rail is a very common thing.

1451. (*Major Marindin.*) While we are on this part of your examination I would like to know when you saw this engine first was it steaming or not ?—No.

1452. And at no time as it was coming down the incline did you see any steam ?—No; I have an idea that I saw steam over the trees at Camp when he evidently reversed; I cannot be very positive.

1453. (*Mr. Harrington.*) You cannot say whether it was then actually in the river or not ?—No.

1454. In what position were you when the train came down the hill ?—I was on the Castlegregory road below.

1455. The train was not going at right angles to your line of vision ?—No.

1456. More parallel ?—Oh, it was at right angles to my line of vision.

1457. Then you would be able to judge of its speed ?—Yes.

1458. You know this place very well ?—I am very familiar with the place.

1459. You said you had no experience of any disaster on that line, I believe you generally take a safer mode of travelling there ?—I frequently travel by the railway and find it very convenient.

1460. You have examined this curve and the gradients at both sides ?—Yes.

1461. From your knowledge and the measurements of the gradients and curves, do you consider that approach and the curve there safe ?—I do not.

1462. Would you go further and regard it as extremely dangerous ?—I would unless the limits of speed were observed; if you could guarantee the limits of speed I think it is safe enough.

1463. If a brake gets out of order, or coming down the hill, anything which renders a brake unworkable, the steam becomes exhausted; you think all those things make that place particularly liable to accident at any time ?—I think so.

1464. I think you measured portion of the gradient under this bridge ?—Yes, I took the levels up there.

1465. And you found that was in excess ?—It was admitted yesterday; it is a very short bit, about 100 feet.

1466. A gradient of 1 in 26 ?—Yes.

(*Mr. Harrington.*) I think as Mr. Goodwin is up here we might have his suggestion as to how this defect in the curve might be obviated without any expense.

(*Major Marindin.*) It is patent how it might be obviated.

1467. (*Mr. Harrington.*) We might have it in evidence. Do you see any great difficulty in obviating that very acute curve there ?—There is no difficulty as long as you can get the money.

1468. (*Major Marindin.*) By a deviation southwards ?—Yes, what Mr. Hickson suggested.

1469. (*Mr. Harrington.*) Crossing at a higher part of the river ?—Yes, and bringing the junction nearer to Tralee it would necessitate some cutting and give a flatter gradient.

1470. Would you also recommend that, if possible, this extraordinary gradient should not be allowed ?—Going up the valley would necessitate some sharp curves, not perhaps as sharp as there; I think you could get almost a level gradient, that is only from just studying the Ordnance map.

1471. You know the whole course of the line ?—I do very well.

1472. And I believe, as a matter of fact, the observations applying to this place would also apply to some other parts of the line ?

(*Mr. Adams.*) We have been considering this matter. We must confine it to this accident. All our warrant is to inquire into the causes and circumstances of the accident at Camp.

1473. (*Mr. Harrington.*) We are trying to put it a little further, and getting the means of remedying it and preventing further accidents, and having regard to the fact that they are occurring while your Commission is sitting. You have seen the regulations as to speed in the regulations of General Hutchinson ?—I am not very familiar with them, but I have a general idea.

1474. I will show them to you, and as it is a matter of some importance to the public, and as the company seems to have a doubt on it, I have to refer to these oblique crossings. You will see from another report of General Hutchinson's there is nothing to restrict it to the tramway. In his report of December 24 he says :—" On the railway portion of the line there are " 11 level crossings of public roads authorised by the " Orders in Council, two of those on gradients on 1 in " 30 ought never to have been allowed." I want to point out that this crossing at Skylough Gate is evidently one of those two. And in the directions as to speed he says :—" Five miles an hour at the following " places :—At the oblique crossings of all roads when " approached on the level or on a falling gradient." Do you see anything in that which would limit the restriction of speed to the tramway portion of the line ? —No, I do not.

1475. As it is worded there, and especially having reference to the paragraph in the preceding report, do you believe that it should limit the speed at Skylough Gate to five miles an hour ?—I do, certainly.

1476. (*Major Marindin.*) In your position as county surveyor, you are responsible to whom ?—The grand jury.

1477. Is it your duty or part of your duty to make any periodic report on this line ?—Yes ; I make an annual report to the grand jury at the Summer Assizes on the general condition of the permanent way and fencing and the rolling stock.

1478. Have you that report ?—I can get you the last report. It is made in June 1892.

1479. You have not yet made your annual report for this year ?—No.

1480. You might read the report, I think ?—

Report of the County Surveyor of Kerry to the Grand Jury at Summer Assizes, 1892, on the Tralee and Dingle Light Railway.

Mr. Foreman and Gentlemen,—I beg to lay before you the following report on the condition of the permanent way, and works in connection therewith, and the rolling stock of the Tralee and Dingle Light Railway:—

1. I inspected the line on 20th, 27th, 28th, and 29th of last month, and, speaking generally, found the permanent way in good repair.

The following matters should be attended to:—

2. Between Tralee and Castlegregory, a large number of sleepers require to be renewed, which should be done with as little delay as possible. On the same portion of the line a good deal of ballast is required. In many places the packing of the sleepers requires to be attended to.

3. All along the line a number of fish bolts are missing, and many of the iron clips are broken.

4. The paving of one of the arches of the bridge at 5¾ ms. require renewal ; and also of the bridge at 25¼ ms.

5. One of the gates at Skirlough public road crossing is gone, and should be replaced with as little delay as possible, as cattle and donkeys are apt to stray in on the line at this place. The railing of the cattle trap at the east end of the cutting at the same place requires repairing.

6. The road fences at the following places require repairs:—Between 7¾, 8¾ ms., at 13¼ ms., at 18¾ ms., and in several other places along the branch.

7. The wheels of two out of the three engines which required it have been turned ; one of these engines met with a serious accident some time ago by having the crown plate of the fire-box cracked, which of course renders it useless until it has been repaired. In other respects the engines seem to be in good repair and fair running order.

8. The waggons and carriages are all in good repair.

9. All the ironwork of bridges, farm crossing gates requires to be painted.—I have the honour to remain, gentlemen, your obedient servant.

Singleton Goodwin.

Tralee Court House, 6th July 1892.

1481. That was your report on inspection of last year ?—Yes.

1482. Did you make any inspection to see whether those requirements of yours had been attended to or not, do you know ?—No, I did not. My position is very undefined. I have no compulsory powers.

1483. There is nothing in that report to draw any particular attention to any deficiencies in the permanent way at this particular point ?—No.

1484. At this particular point, apparently, the permanent way was found to be in good condition ?—Yes, generally good. The general fault with the permanent way then was requiring new sleepers and ballast, and from my own observation during the last year there has been a good deal of work in that line done. The only thing I observed is the gate at the public road crossing has not been put in.

1485. As far as the state of the line at the particular point we are engaged on there was nothing which you thought it necessary to call attention to ?—No.

1486. (*Mr. Haggard*). You did not notice that there was one portion which had fallen to 1 in 26 ?—No, I did not test the gradients.

1487. As to the limits of speed, this line at Skirlough at both sides is a railway ?—Yes, at both sides of the road.

1488. It is railway running into railway across a road ?—Yes. But what fixes it on my mind that General Hutchinson intended that restriction is that I was with him at the inspection and he remarked to me, I do not know whether it was that crossing, but the other level crossing, which is on the branch, and which is exactly similar, it is in railway, and he remarked to me going down, "This should never have been allowed." He turned to me and said, "Your predecessor should never have allowed this." That is what fixes it on my mind that he intended the speed to apply to these places.

1489. Is it not in the position of an ordinary railway crossing the road with gates to it, why should there be any restriction on speed ?—Of course it is, that is why I formed my idea on the wording of the regulations, that he intended them to apply to these two level crossings, because he made that remark to me.

1490. He made the remark that this should never have been allowed ?—Yes, and in the regulations he says the oblique crossings of all roads.

1491. Do not you read that to apply to the tramway portion of the line ?—And these two.

1492. (*Mr. Harrington.*) At all events you have not had any inspection of the line since to see whether your requirements were carried out ?—No.

1493. But you have personal observation as to one requirement, the gate ?—That has not been put in.

(*Major Marindin.*) It is fair to say that he observed a good deal of work had been done with regard to the re-sleepering and ballasting.

(*Mr. Harrington.*) You will best know the value of the observations I have to make on another portion of General Hutchinson's report, in view of portion of the evidence last evening ; one witness said that the automatic brake was not the brake which was in operation at all on the engine.

(*Major Marindin.*) I think not. It was rather this, he said there was not the automatic attachment to the valve in the guard's van ; it affects the question as to whether the application of the brake suddenly on the engine throws open the valve.

(*Mr. Harrington.*) I notice in the report that the brakes are automatic.

(*Major Marindin.*) In some patterns of valves in the guard's van there is an automatic chamber or attachment, which, when the brake is suddenly applied, throws open the valve in the guard van by itself, a sudden application by the driver throws it open so as to obtain a flow of air at that end, making the application of the brake quicker. In this particular brake that is not so.

1494. (*Mr. Harrington.*) You examined this place the day after the disaster ?—The day.

1495. Did it appear to you as if the wheels had gone at all on the check rail ?—Running on it, oh, no. I could not see any marks on the rails whatsoever, I looked carefully. I could see no evidence even that the wheels had passed over the rails. Of course the other carriages had come down after the engine.

Harry Quinn sworn.

1496. (*Major Marindin.*) How long have you been in the service of the company ?—Since the line opened.

1497. How long have you been a driver ?—Something over four years.

1498. And where were you employed driving before you came to the line ?—Firing on the Great Southern and Western Railway.

1499. How did you come here, in answer to an advertisement for drivers ?—I was sacked off the Great Southern and Western Railway.

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1500. Then you got employment on this line as a driver ?—No, sir.

1501. How did you come to drive here ?—I came here as a fireman.

1502. How long were you firing on the line ?—Eight or nine months.

1503. How long have you been a full driver on this line ?—I could not exactly tell you; when the contractor was here I got driving first.

1504. Then you have been a driver ever since the line was opened ?—Yes.

1505. Had you been working on the line some time previously with the contractor ?—Yes.

1506. When was the last time you passed over this particular part of the line before the accident happened ?—That morning.

1507. You went down to Dingle that morning ?—I did.

1508. Which engine were you driving on the way down ?—No 5.

1509. And going down No. 1 was attached to you ?—In front.

1510. In going down who worked the brake ?—The driver of No. 1.

1511. But it was connected through ?—It was connected through.

1512. On your downward journey did the brake act properly ?—It did.

1513. And was very often applied no doubt ?—It was, sir.

1514. Used on the way down ?—We generally use the hand brake on the inclines, we can check it with the two engines.

1515. Have you ever driven No. 1 ?—Either the Friday or the Saturday before the accident.

1516. In what state was it, in good order ?—In good order.

1517. Do you know why it was sent into the shops to be looked round; was it on your requisition it went in ?—No.

1518. When you drove it, as far as you knew it was in good order ?—It was.

1519. Was the brake in good order ?—It was.

1520. Have you ever had any difficulty in checking your speed, coming down that incline, to within the proper limits ?—I never had any difficulty in it.

1521. You have been able to keep your train running at 12 miles an hour down the incline and five miles an hour where the accident happened ?—Yes, but I do not think we ever went five miles an hour over it.

1522. In going round that curve what has been the speed you ran at ?—I often went round it at six, but we always check the engine before coming on the curve, six miles an hour or seven or ten miles, but when we come on it I let her swing round.

1523. Have you been in the habit of coming round the curve at 10 miles an hour with a passenger train ?—No, sir.

1524. What has been the highest speed ?—Between five and six miles an hour.

1525. And you had no difficulty in keeping your train in proper control coming down this line ?—No, sir.

1526. (*Mr. Huggard.*) We may as well have it at once you are the driver with whom the train in the contractor's time ran away down this hill ?—I was; a ballast train.

1527. Tell us how that train was made up, was the engine in front or at the rear ?—At the rear.

1528. And how many ballast waggons had you ?—As far as I can remember it was 11 or 10.

1529. Were they loaded ?—They were.

1530. Would that have been as heavy a train as the train of the accident ?—I think it was twice as heavy.

1531. What brake power had you on, had you a vacuum brake on the engine ?—No, all the waggons were not fitted up at that time.

1532. I am not coming to the waggons yet, but the vacuum brake on the engine ?—Yes.

1533. And applying to the engine wheels ?—Yes.

1534. Did it extend to any carriage ?—No, sir.

1535. Therefore you had nothing braked at all except the engine ?—That is all.

1536. (*Major Marindin.*) No van at the other end ?—No.

1537. Were there any vans on this train, any brake vans ?—No, sir.

1538. At what point of the hill did she get away from your control ?—Coming into Camp village somewhere.

1539. What speed did she get to before she came to this curve, as near as you could tell ?—Very nearly 30 miles an hour or more.

1540. Did you keep your brake locked upon the wheels of the engine going round the curve ?—No, sir.

1541. Did you let her do her best ?—I did and checked her after.

1542. I suppose every driver has different ideas of coming down a hill ?—I could not tell you about any driver but myself.

1543. When you were coming round this curve with passenger trains in the ordinary course of business, do you keep the break on ?—No, I let her swing round nice and easy; sometimes I may have to put on steam to get round.

1544. As you get round it ?—Yes.

1545. (*Mr. Huggard.*) About how many yards off from the bridge do you take off the brake ?—About 10 or 12 yards.

1546. Do you come down at one even pace the whole hill from Skirlough down ?—Sometimes I go a bit quicker, 6 or 8 miles an hour.

1547. You have never exceeded 8 miles an hour coming down ?

(*Mr. Harrington.*) He never said that.

(*Major Marindin.*) He is allowed 12.

1548. (*Mr Huggard.*) But I want to know does he exceed 8, as a rule your pace is 6 ?—Six.

1549–59. What is the highest you go to with passenger trains ?

(*Major Marindin.*) After leaving Skylough crossing ?—6 and 7 and 8, no more. I often went 12 though.

1560. Did you ever find any difficulty in breaking the train on the incline at 8 miles an hour ?—No.

1561. I suppose every driver knows what a greasy rail is ?—I expect they do.

1562. On this particular day of the accident were the rails greasy ?—They were.

1563. Were they exceptionally greasy, very greasy ?—They were very often on that same place.

1564. (*Mr. Harrington.*) You went out this morning to Dingle ?—Yes.

1565. You were on No. 5 engine ?—Yes.

1566. Who was driving No. 1 engine ?—Mr. Redshaw.

1567. Are you sure, now think of yourself, who was the driver, actually in charge of No. 1 engine going out that morning ?—Mr. Redshaw.

1568. Did you see him on No. 1 engine ?—I did.

1569. The whole way out ?—Yes.

1570. Who was with him on the engine ?—Dick Dillon, Barney Loughlin, I do not know the other chap, the name of the fitter.

1571. Then the man who was driving No. 1 engine was the man in charge of the passenger train going out that morning ?—He had the whole charge; he was in front of the train.

1572. What employment were you in before you came here ?

(*Major Marindin.*) The Great Southern and Western Railway.

1573. (*Mr. Harrington.*) You did not know Redshaw before he came to the employment here ?—No, sir.

1574. Did you ever hear whether he ran an engine in any other place before he came here ?—No, never.

1575. Did you ever hear that he did not ?—I never did.

1576. Quite sure of that; did you hear in the yard among the workmen in the employment, did you ever hear it observed that he never ran an engine until he came to Tralee?—I never made any acquaintance with any of the men in the yard.

1577. (*Mr. Morphy.*) The men in the yard did not know at all.

1578. (*Mr. Adams.*) Did you ever see Redshaw drive?—I did.

1579. Could he drive?—Yes, sir.

1580. (*Mr. Harrington.*) Where did you see him drive?—I fired for him from Tralee to Dingle.

1531. Did you often?—Once.

1582. What are your directions as to coming down this incline, what rule did you observe? It seems to me you have a very hazy idea as to what you are to do; were you ever told anything as to that steep coming down from Glen-na-galt?—It is in the rule book. If you have more than four waggons you are to stop on the top of the hill and put all the brakes down, the hand brake is to be used on this incline. It says in the rule book, too, when you want to signify to the guard to put on his hand brake, if you think you are going too quick, give three sharp whistles and one to take off.

1583. Now as to the rate of speed, did you since the line was opened for public traffic, did you come down that whole incline at more than 12 miles an hour sometimes?—No, sir.

1584. Are you sure?—I am not certain except with the ballast train, when I was working.

1585. I am speaking since the line opened, and you were in charge of a public train?—I forget what time the ballast train was working. I never came down more than 6 or 8 miles an hour.

1586. Did you say now to Mr. Huggard in the commencement of your evidence that you often came down there at the rate of 10 miles an hour and 12 miles?—Not with a passenger train, with a ballast train.

1587. (*Major Marindin.*) I think it was rather an answer to me, and I think he was alluding to this runaway train?—We have no occasion, we have plenty of time to come down there, sometimes 25 minutes.

1588. (*Mr. Harrington.*) What is the speed at which you are bound to come down the curve at the bridge where this disaster took place?—Two or 3 or 4 or 5, never any more.

1589. What is the speed you must not go beyond in coming down to that bridge; is there a regular fixed speed for approaching that spot?—I forget about it.

(*Major Marindin.*) Will you ask him what is the speed according to the rule on going round the curve at which the accident happened?

1590. (*Mr. Harrington.*) Precisely, that is what I am asking. You are an intelligent driver on that line. Since it opened you have driven it every day?—Four times a day up and down.

1591. What is the speed at which you must come round this curve where the accident happened?—I do not know. I never took notice in the rule book. Five miles an hour I come round it, but I did not see anything in the rule book about it.

1592. Is that you have there your own rule book?—Yes.

1593. How long have you that in your possession?—I have five or six.

1594. How long have you that particular one in your possession?—About a month, I think.

1595. (*Major Marindin.*) Before that rule book was issued to you had you one similar to it?—I had two or three of them.

1596. Have you ever since you have been driving on this line as a driver had a rule book in your possession?—I have.

1597. Always?—Always.

1598. (*Mr. Harrington.*) Do you sign for a rule book when you get it?—Yes.

1599. Let us know when you siged last for a rule book.

(*Major Marindin.*) The man says he has always had a rule book.

(*Witness.*) I did not sign for the rule book I have now.

1600. (*Mr. Harrington.*) When did you get it?—I used always get it from the superintendent, and there is no superintendent there at present.

1601. If there was a superintendent there you would have signed for the rule book, and therefore you got the rule book since his death?—No, I did not.

(*Major Marindin.*) It does not appear to me to matter very much whether he had this particular rule book or not.

1602. (*Mr. Harrington.*) It does not, but I am trying to make out he had not one at all before?—I can bring two or three others to-morrow morning.

1603. When did you get this particular one?—About a month ago.

1604. (*Mr. Adams.*) Did you get it since the accident?—No.

1605. Who wrote that, "31st March 1891," in the front page?—

(*Mr. Huggard.*) It is in the handwriting of an employée named Sweeny, who is a man who goes along the line looking after stations.

(*Mr. Morphy.*) One of those was found in the pocket of the unfortunate Redshaw.

1606. (*Major Marindin.*) Every driver is supposed to have it, but apparently this man, if he had a copy of the rule book, did not take much notice of it?—No, I did not.

1607. (*Mr. Harrington.*) You reported to your superiors in the company that on some occasion when you were passing the line was soaped?—I did.

1608. Did you complain to any policeman of that?—I forget; I could not tell you.

(*Mr. Adams.*) Major Marindin and I are unanimous in thinking that soaping or any malicious act of this kind had nothing to do with the accident we are inquiring into now and we have more than once expressed our opinion on that point.

(*Mr. Harrington.*) I did all I could to keep it out, but it was sprung on me with so much persistency and has got into the newspapers, and I want to bring it to a test. Was it ever reported to any independent person, a constable, or anyone who could give an impartial opinion?

1609. (*Mr. Adams.*) Was it reported to the police?—The manager might have done it.

1610. (*Mr. Harrington.*) Did you ever do it?—I could not tell you that.

1611. Some time previous to this you were driving a special with pigs up the hill and could not manage it, and you had to divide your train?—I had.

1612. Where did that occur?—Very nearly the top of Glen-na-Galt.

1613. And there were passengers as well as pigs on the train?—Yes.

1614. What engine had you on that occasion?—No. 5.

1615. (*Major Marindin.*) Is that the light or the heavy engine?—The heavy.

1616. (*Mr. Harrington.*) Was it on pressure from he passengers you divided the train or on your own motion?—My own motion.

1617. What did you do?—I ran short of water and coal and had to divide the train.

1618. (*Major Marindin.*) Could not keep up sufficient steam?—Yes.

1619. You came to a stand, divided the train, and took the first portion up to the top?—Yes, and went to camp.

1620. And then went back for the other part?—Yes.

1621. I suppose the whole train was fitted with the automatic vacuum brake?—Yes.

1622. So that the part you left behind would stand with the brake on?—Yes.

1623. (*Mr. Harrington.*) Ran short of coal and water both?—Yes.

1624. You were in court when O'Leary was giving a description of the exertions to come up that incline on this day, the length of time it took to come up, the different times it stopped and backed?—I was not here.

1625. Were you in court when he gave that evidence at the inquest?—About what engine?

1626. The engine that came up before you on that day?—Oh, I thought it was the one I was working myself. I was.

1627. You heard all he said about the stopping and backing and getting it up?—Yes.

1628. Can you give, as an expert, intelligent driver, any explanation to the court of what was wrong with that engine or the driver, or was it both?—I cannot say there was anything wrong with the engine.

1629. With the driver; was he able to work it?—He was, to be sure, able.

1630. What was the matter; why did it not come up?—I was not there and could not tell what was the matter.

1631. Can you give us any opinion as to what was the matter with all these attempts to come up?—It must be a greasy rail or something; it was the lightest load that ever left Dingle on a fair day.

1632. And still it was not able to bring it up?—He was able to bring it up; he did bring it up.

1633. Was it the greasy rail that made it run past the station at Annascaul?—I was not there and could not tell.

1634. (*Major Marindin.*) What do you think was the reason that the man overran the station at Annascaul?—He might put on brakes and let it skeet down all the way if the rail was greasy.

1635. If you were told he had no continuous brake on, what would you say was the reason he ran past the station?—He had no power on her.

(*Mr. Morphy.*) At the inquest it was shown that there is a water tank at this place you are speaking of, and that if the driver overshot the water tank by even a yard he would find it necessary to go on a little distance in order to give himself a momentum to go back.

(*Major Marindin.*) It is quite clear the man in approaching the station overran, and my explanation is that the man had not his continuous brake attached.

(*Mr. Morphy.*) He ought to have stopped at a certain point where there was a water tank, owing to a greasy rail he overshot it by a yard, and he allowed the train to go on a bit to give him a run to go back.

(*Major Marindin.*) The tank is at the foot of a gradient of 1 in 30, and he went to get the level.

1636. (*Mr. Harrington.*) "We came slowly but had "very little stoppage. About 200 yards the other side "of the hotel the engine came to a standstill again, and "he was trying to start, and she was going backwards "and forwards for nearly half an hour." Was that a greasy rail?—If it was raining the whole road would be greasy.

1637. If she goes forward she gets the grease off the rail; at all events she was going backwards and forwards for half an hour; have you no other explanation only that it was a greasy rail?—That is all.

1638. "She used to run a length of metals and "back again. We moved slowly until we arrived at "the first crossing on the country road this side of "Annascaul. All the jobbers got out of the train. I "could not say why we stopped there."

1639. (*Mr. Adams.*) You have heard this over and over again. Have you formed any opinion why all this happened?—All I know is that there was a greasy rail.

1640. (*Mr. Harrington.*) You have no other explanation to offer for that except the greasy rail?—Yes.

1641. The engine was all right?—Yes.

1642. The man was all right?—Yes.

1643. Do you think there was steam sufficient in the engine?—I could not answer that.

1644. Had you ever to tear up the palings to supply the boiler?—Never.

1645. Or borrow water?—Never.

1646. Turf?—No, sir.

1647. Was it done to your knowledge?—I could not tell you.

1648. Did you hear it?—I heard something about it, but I was not there.

1649. (*Major Marindin.*) At the time the ballast train ran away were the waggon brakes pinned down?—The hand brakes.

1650. And you had the brake on the engine?—Yes.

1651. And no connexion through the train of the vacuum brake?—No, they were not all fitted up at the time.

1652. Can your engine sand at both ends?—Yes.

1653. Then as to the rule book, that particular book that was put in just now, you have only had for a very short time?—That is all.

1654. But had you one previously similar to that?—Yes, sir; I can bring them in to-morrow morning.

1655. What are your hours of work?—I leave in the morning at 7 o'clock.

1656. What time do you arrive here?—I do not come here, I come to Camp.

1657. What time do you go off work in the evening?—8.55.

1658. How long are you off duty in the middle of the day?—I am off at Camp from a quarter to 9 until 25 minutes to 11, then I go back to Dingle.

1659. What time do you get there?—12.25.

1660. What do you do then?—I am done then until 3.30.

1661. Then you come on duty and bring the train to where?—To Camp.

1662. What time do you get to Camp?—5.15.

1663. Then how long are you off there?—From that until eight minutes past 7.

1664. And then you go on Dingle again?—Yes.

1665. And get there at what time?—Five minutes to 9.

1666. Then you go to your shed, and what time do you leave duty?—About a quarter-past 9.

1667. (*Mr. Harrington.*) I wanted to ask one question about this runaway train, you led the Commissioners to believe you stopped the train at Camp?—I did.

1668. Did it not run a full mile beyond the junction?—It did not, and I have a lot of witnesses here to prove it.

1669. (*Major Marindin.*) I do not think it very much matters what happened to this ballast train; it was differently made up to this train, except the curious fact that he ran round the curve at 30 miles an hour. Why did you come down with the waggons in front?—I could not tell; it was the guard was in charge.

1670. (*Mr. Morphy.*) Do you consider that a heavier brake van at the rear of the train would have been any assistance towards checking the velocity that day down the gradient?—There was a heavy brake van in the contractor's time, and it used to give us enough to do to pull it up and down.

1671. Do you consider that a heavy brake van would have been any assistance towards checking the train coming down the incline?—Well, I do not know; all the carriages that were on the train acted as brake vans.

1672. (*Major Marindin.*) Supposing there had been no continuous brake on the train at all, a heavier brake van would, of course, have been a great assistance?—Certainly.

1673. But if the train had a continuous brake on all through it did not matter whether the brake van in the rear was heavy or light?—It does not matter; every vehicle acted as a brake van.

1674. (*Mr. Morphy.*) You stated that if you had been driving the train that day you would have allowed her to swing round nice and easy?—I would.

(*Major Marindin.*) After having got his train absolutely in control and approaching this crossing at a proper speed, he releases the brake and lets her go round with her own momentum?

1675. (*Mr. Morphy.*) Supposing O'Leary had applied the vacuum brake after leaving Skirlough Gate, and did not take it off, would you have been able to do that supposing he swore, although I believe he swore more at the inquest, that he applied the vacuum brake just after leaving Skirlough?

(*Major Marindin.*) He did not swear that here, but that he never touched the brake until it got into the wreck.

(*Mr. Morphy.*) Have you not the note-taker's evidence of what occurred at the inquest, and Mr. Adams will tell you his evidence is unreliable owing to that contradiction. He swore before the coroner, according to the police note-taker, that after passing Skirlough he rushed the vacuum brake on, and he cannot remember whether he took it off.

(*Mr. Adams.*) What he swore before the coroner was that at some time after passing Skirlough; whether he actually fixed the time then or not we do not know, but we know he has fixed it here, and said that it was just in the moment of the agony he did it, and there was nothing in the evidence before the coroner to contradict that.

(*Mr. Morphy.*) Supposing that before reaching the curve he applied the vacuum brake, could you have swung round it easily?

(*Major Marindin.*) I cannot understand how in any case a man running at 40 miles an hour can go nice and easy round a three-chain curve.

1676. (*Mr. Morphy.*) You were examined before the coroner?—I was.

1677. Do you remember stating that if the driver or guard put on the vacuum brake and did not release it, that you would not have the same control of the engine?—I stated that I could not make sufficient vacuum for the working.

1678. Did O'Leary come up in court and contradict you?—He did.

Then what was the meaning of his doing that if he understood the vacuum brake?——

(*Mr. Harrington.*) I think O'Leary has shown he was the most intelligent man in the company's service.

(*Witness.*) It is a different brake in the guard's van from what it is in the Great Southern and Western Railway.

1679. (*Mr. Adams.*) There was a question Major Marindin asked you; if you were going round at 40 miles an hour, as this unfortunate train was, would you take off the brake?—I would if I could; I would let her swing round, I would not let her skeet.

1680. (*Mr. Huggard.*) When Leary came up in the court to contradict you, did he state that it was on the curve going into the accident he touched the lever?—I do not remember that.

1681. (*Mr Harrington.*) You said to me some time ago that you acted once as fireman for the unfortunate man who was killed?—Yes.

1682. Did you refuse to act with him at any time?—No, sir.

1683. You never refused?—No, I could not refuse, because we were trying a new engine, and it was his place to try it.

1684. Did you refuse or tell anybody you refused to go with him on any occasion?—Never.

1685. (*Mr. O'Reardon.*) You drove the train that followed the special on this occasion?—Yes.

1686. How was the train you drove made up?—Composite carriage and guard's van and four waggons of pigs.

1687. Coming along up to the time you were stopped near Camp, had you any difficulty from a greasy rail or otherwise?—It was raining heavier when I was coming and the rails were washed. A good washed rail is better for driving.

1688. You were on this engine on the Friday previous to the accident, was this engine a good steamer?—I could not tell you what way she steamed that day.

1689. Was she losing any steam?—No, except through the safety valves.

(*Mr. Harrington.*) I should like if we could get the amount allowed by the contractor for the repair of these engines.

(*Mr. McCowen.*) We cannot lay our hands on the report, but we can get a copy from Mr. Ivatts.

(*Mr. Harrington.*) Did you take the engines over at the contractor's price and this 10*l.*?

(*Mr. McCowen.*) Yes, the contractor was to have the use of the engines, and we were to take them over with ordinary wear and tear

(*Mr. Harrington.*) What I want is the letter recommending the 10*l.*

(*Colonel Rowan.*) I do not think Mr. Ivatts mentioned any sum, he said what should be done; in fact, the only thing to be done to the engine was to turn the tyres of the wheels, and there was a controversy as to what it would cost to get the tyres turned, and we took as a compromise that sum mentioned.

Sergeant William Gilbert, R.I.C., sworn.

1690. (*Mr. Adams.*) Are you stationed at Annascaul?—Yes, sir.

1691. Do you remember the day of this accident?—Yes, sir.

1692. Did you see this train that met with the accident passing Annascaul?—Yes, sir.

1693. Were you on the platform?—No, sir, I was up at my own station, at the barrack; I saw it passing the barrack. Immediately after it I had passed the station going up by Mr. Moriarty's hotel it was going slowly, it stopped then and went back to the station again and came on then. I was going on patrol on the road leading on towards Camp, and I overtook the train about 1½ miles beyond Annascaul railway station, it was then across the road. There is a crossing on the public road there; it was stopped there when I got up to it

1694. Was it going backwards and forwards, or at a dead stop?—It was partly at a dead stop, and sometimes it would go on a little.

1695. Did you go on to where the train was?—I did.

1696. Did you see the driver or guard?—I saw the guard O'Leary.

1697. Where was he, in his van?—Out on the road.

1698. Had you any conversation with him?—I had.

1699. What was it?—He made the remark to me that the engine-driver appeared to be a little timid or nervous.

1700. Did he say anything else?—That is all he said.

1701. Had you any conversation with the driver or anyone else in the train?—No, sir.

1702. Did it start along after you were there?—Immediately after, a few moments after.

1703. Did you see the driver?—I saw the driver; I did not notice anything unusual about him.

1704. Did he say anything about his knowing how to manage or anything of that kind?—No, your worship, he did not make that remark at all.

1705. (*Mr. Harrington.*) Did you understand these observations had any application to the driver being unable to manage the engine?—Well, no, then, I did not.

1706. Do you know what was the meaning of his observation about the man being fatigued?—Timid or nervous, not fatigued.

1707. You do not think he meant any insinuation that the man was intemperate?—He did not. I saw the man.

(*Mr. Adams.*) That is the common case of all parties that this man was perfectly sober that day.

1708. (*Mr. Harrington*) That is so, but I want to know what the sergeant understood him to make the observation about?—The conclusion I came to was that in consequence of the slippery state of the rails and the heavy load he seemed to have a difficulty in ascending the height.

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(*Mr. Adams.*) We have the phrase now that was used.

(*Mr. Huggard.*) And he understood it was the slippery rail and the heavy load.

1709. (*Mr. Harrington.*) Was your attention ever directed to any grease or soap being placed on the line ?—It was reported to me that it was suspected that something of the kind was applied.

1710. Did you visit the place ?—I examined the rails myself and saw no traces of it.

SAMUEL MURRAY HUSSEY, J.P., sworn.

1711. (*Mr. Harrington.*) You were for a time, I believe, a director of this company ?—What is called a baronial director

1712. And you are not a director of the company now, I think ?—No.

1713. Might I ask what was your reason for leaving the Board ?—The arbitrator appointed by the grand jury made what I considered a very unfair and garbled report.

(*Mr. Adams.*) Had that anything to do with this accident ?

(*Mr. Harrington.*) It has with the efficiency of the line.

(*Mr. Adams.*) This must be ruled once and for all, we cannot by any possibility, having regard to the terms of our reference, extend this inquiry into the general state of the line.

(*Mr. Huggard.*) Mr. Hussey might give his own evidence if he has anything to offer as to the state of the hill.

(*Mr. Harrington.*) He has something to offer as to the state of the hill and the state of the rolling stock.

1714. (*To Witness.*) You knew something of the rolling stock which was on this line ?—Yes, a little.

1715. Did you know anything about this particular engine, No. 1 ?—No.

1716. Were you on the board when it was taken over from the contractor ?—I think I was.

1717. Can you recollect whether you opposed the taking over of that engine ?—As well as my memory serves me, what occurred was that some of us directors thought the engine would be considerably worn out by working for the contractor, and then there was an impartial person appointed to say what should be done to the engines and what money should be given to the company for doing it.

1718. (*Mr. Adams.*) And that was done ?—That was done.

1719. (*Mr. Harrington.*) And then they were taken over after that ?—They were taken over after that.

1720. What was the amount which was allowed ?—I could not tell you ; the secretary will tell you that.

(*Mr. Adams.*) As I understand the matter was referred to an arbitrator, and he appears to have been a very skilful person, Mr Ivatt ; he awarded a certain sum, that sum was paid and I do not think anything would be gained by going into it.

(*Major Marindin.*) Does it matter what amount was paid to put these engines in order ?—We do not know what the state of the engines was before the company got them, they may have required very little to be done to them or a great deal, if this gentleman who examined them thought a very little was required I do not think it matters much to us.

(*Mr. Harrington.*) But if there was a certain amount required to be done to the engine and that was not done.

1721. (*Mr. Adams.*) Do you know as a matter of fact whether or not this engine was repaired ?—To the best of my belief it was, they were all repaired. Here is the auditor's report bearing me out, because he says "a large amount to locomotives, wagons, &c., seems to have been done outside the company's premises," and alleges it as a complaint.

1722. (*Mr. Harrington.*) You know the place where this unfortunate disaster took place very well ?—I do.

1723. Do you consider the position of the line with the steep gradient and acute curve safe for public purposes ?—As far as my opinion goes—it is not worth very much—I should consider it a very dangerous place, the smallness of the money precluded a good line being made. The engineer did marvellous work in getting a line there at all for the money. Every other line in Kerry cost 6,000*l.* a mile, this, practically speaking, only cost 2,000*l.* a mile.

(*Mr. Horgan.*) 3,000*l.*

(*Witness.*) But there was the law costs and the land and everything else.

1724. (*Mr. Adams.*) And the rolling stock would have to come out of that ?—My idea is that that absorbed about 20,000*l.*, and of the other 100,000*l.* I doubt if he could have floated it at par, so that, practically speaking, all he would get would be 2,000*l.* a mile.

1725. What interest ?—Four per cent.

1726. He would never have floated it at par ?—For the Cahirciveen and Kenmare railways, which were made by Mr. Balfour, he gave 6,000*l.* a mile.

1727. You have heard the description given by the witness O'Leary ?—I was not by at the complete evidence of any one man.

1728. You heard the evidence read to-day of the various stoppages and attempts to get up the hill, running a distance and stopping and backing again, what conclusion would you arrive at as a practical man with regard to the engine or the driver ?—My opinion is worth very little ; I should say the engine was overweighted.

1729. (*Mr. Huggard.*) I understand you to say, Mr. Hussey, you voluntarily retired from this position ?—I did.

1730. (*Major Marindin.*) You said you considered this curve a very dangerous place ? Do you consider that it is dangerous for an engine to go round, supposing it does not go faster than the regulation speed of five miles an hour ?—If it went round at a walk I should consider there would not be much danger, but the danger is having it at the bottom of a place where it is not easy to stop the speed.

1731. (*Mr. Harrington.*) Or if the steam became exhausted on that portion of the line and there was no means of working the brake ?—It is quite plain if the engine ran away it is a very awkward fence to jump.

1732. (*Mr. O'Reardon.*) Your idea is that this line is built too cheap and therefore is not safe ?—It was built too cheap, no doubt.

DUNCAN SCOTT, C.E., sworn.

1733. (*Mr. Harrington.*) I believe before this line was actually formed you were projecting a line for the same district ?—I was asked by a committee in Dingle to make a survey for a line.

1734. You had to deal with even this particular part of the line ?—I made a survey of the whole line.

1735. And in the survey you made you placed the bridge at a different position on the river ?—Yes, I have got the working map.

1736. (*Major Marindin.*) Describe where it was ?—It was 500 or 600 yards higher up the valley.

1737. I suppose that would entail somewhat more expense than the construction of the present bridge ?—Not very much more.

1738. (*Mr Harrington.*) You have examined the curves on the present line?—Yes.

1739. In your opinion is this curve dangerous to public life?—Exceedingly dangerous. If taken higher up it could be brought down to the bridge on a level, and the bridge should have a radius of seven chains.

1740. The radius at the curve is how much?—Three chains I have been told; I did not test it.

1741. You are aware that this acute curve is approached by a long series of very steep gradients?—Very steep.

1742. In your opinion anything that would set either the gear of the brake out of order or anything which would impair the working power of the engine coming down that gradient would at all times involve a risk to human life?—Certainly; drivers on all railways do not observe the rule as to speed invariably.

1743 Coming down to this you have practically a length of how many miles of that steep gradient?—Nearly three miles.

1744. So that anything which would impair the efficiency of the engine, or the brake, or anything——

(*Major Marindin.*) I do not think he quite leads us to infer that, that if anything interfered with the efficiency of the engine it would interfere with the working of the brake coming down the incline.

1745 (*Mr. Harrington.*) Have you had any experience of engines?—No practical experience.

(*Mr. Adams.*) Is it not all a question of breaking, the engine had only to run down hill?

(*Mr. Harrington.*) But if the engine had no steam there was no means of applying the brake.

(*Major Marindin.*) Steam does not apply the brake, what applies the brake is atmospheric pressure, steam is only used to maintain the vacuum, which is the stored-up energy; it might very well happen that an engine would be so short of steam that it could not pull up a heavy load up an incline, but yet would have plenty of steam to maintain an efficient vacuum going down it.

(*Mr. Harrington.*) That may happen, but the other may happen also that the supply might become so exhausted that it had no steam at all we have seen cases where it has stopped on the level. There is no fuel and no water.

1746. (*Major Marindin.*) You say that this is a very dangerous curve, and the danger is due in a great measure to its position which makes it possible that proper speed at that curve will not be maintained by an engine running down to it?—I never knew on any line that the drivers always maintained a proper rate of speed.

1747. If a proper rate of speed is maintained round that curve, do you think there is any danger in running round it at five miles an hour?—I think there is.

1748. At five miles an hour?—I think there is.

1749. (*Mr. Huggard.*) What extra cost, Mr. Scott, to amend the curve?—A distance of about 1,000 yards both sides, and if any part of the line was made for 3,000*l.* a mile, 3,000*l* more.

1750. (*Mr. Harrington.*) Mr. Scott's answer is that if this bridge had not been made an additional length of line would be necessitated of about 1,000 yards?—The bridge would be the same expense.

1751. (*Major Marindin.*) Would it be 2,000 yards or 1,000?—1,000 or about 1,100 yards.

TIMOTHY O'FLAHERTY sworn.

1752. (*Mr. Horgan.*) You are an owner and occupier?—Yes.

1753. An owner under Lord Ashbourne's Act, bought from Mr. Hussey?—Yes.

1754. And you have largely to contribute to the guarantee for this line?—Yes.

1755. You have been travelling over this line almost since it was made?—Very often I did.

1756. And you know this bridge?—I do well.

1757. And you know this curve?—I do.

1758. Now when you pass this bridge and curve, you and those coming from Dingle, do you feel comfortable?—No. I stated here at the late inquiry before General Hutchinson, he asked me what I would suggest, and I said, "Get rid of the officials or tear up "the line." I say now it is the intention of the ratepayers of Corkaguiny to tear up the line and pay the guarantee; I share that with them rather than be involved from day to day.

(*Mr. Huggard.*) These are the people who would not scrap the line?

1759. (*Mr. Horgan.*) This particular curve have you seen it since it was broken down?—I saw it two days ago. This is not the road at all that it was to go, they deviated from the former road.

1760. Did it come before the Presentment Sessions at Dingle?—It did.

1761. And the gentlemen that went from Tralee told you you would never have to pay anything for it?—Oh, no, they did not; but there was a deviation from the original road.

1762. Was there a deviation at that point?—In several places.

1763. (*Major Marindin.*) Was there a deviation at that point?—There was; that was to go above a good bit.

1764. (*Mr. Horgan.*) You say that there were several deviations from the original plans that were laid before you in Dingle?—I do.

1765. At this particular point, because we cannot go outside this curve, at this particular point was there a deviation and change of the road?—I remember that Captain De Moleyns and others——

1766. (*Major Marindin.*) Now will you answer the question, please, plans were put before you?—There were.

1767. Was any deviation made at the particular point where this accident happened?—There was.

1768. From the plans that were laid before your Sessions?—Quite right.

(*Mr. Adams.*) Is this so?

(*Mr. Huggard.*) It is not; the man is quite at sea.

(*Witness.*) I have Capt. De Moleyns to prove it as well as myself.

1769. (*Mr. Horgan.*) Is it of Mr. Scott's plans you are talking?—It is.

1770. No, but talking of Mr. Hickson's plans, was there a deviation from Mr. Hickson's original plans?—I do not know.

EDWARD HARRINGTON sworn.

1771. (*Mr. Harrington.*) You have travelled pretty frequently on this line between Tralee and Dingle?—Yes, a few times.

1772. I believe you advocated the construction of the line in the commencement?—Well, the construction of a line.

1773. You know the position where this accident took place?—I do.

1774. You have been on the scene of the accident?—On the evening, and I went with the coroner and his jury as other pressmen did.

1775. When you got to the scene of the disaster were there men employed repairing the road?—Yes, there were men relaying sleepers; I counted about 22 sleepers.

1776. Now, from your knowledge of the curve,

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taking the acute curve, the steep gradient leading into it, in your opinion is it a very dangerous place for life, this combination of the acute curve and the stiff gradient?—I have not hesitated to describe it as a death trap. This curve of a three chain radius, 198 ft. I believe it is actually 200 ft., but that at the end of a gradient, a continuous gradient of three miles, from, I think, the 10¾ post to the 13¾ post, I think accidents cannot be avoided there.

1777. (*Mr. Morphy.*) It is impossible to avoid it?—It is impossible to guarantee that accidents will not happen.

1778. (*Mr. Harrington.*) You saw the convex?—You are speaking of the cant of the rails, yes, on that evening I asked Mr. Hickson what was the cant, I believe super-elevation is the technical word; Mr. Hickson got a board and went and set his eye to take the cant. I said I could nearly give as good a guess at it myself. He turned to Mr. Peet, who told him it was 3½. I said, "That seems rather small for this curve," but of course it has turned out in evidence now that the cant has come up to 5 inches actually.

1779. (*Major Marindin.*) Do you suggest that it has been altered?—I believe that in the relaying of the sleepers that evening the men packed the sleepers and relaid the new sleepers to the cant.

1780. That may be so on the sleepers that were disturbed, but we have it in evidence that the sleepers were not disturbed only at the commencement of the curve, where they had been disturbed by the engine leaving the rails, and it is impossible for me to imagine that the cant can have dropped suddenly from the amount now shown of 4¾ ins. to 3½ ins. before the accident, and you say Mr. Hickson did not measure it then?—He did not measure it then, though the men were relaying it; it appears to me he had no means of measuring it. I have no doubt that the cant was at that moment the same as it is now.

1781. (*Mr. Harrington.*) It was being relaid without actual measurement?—Yes.

(*Major Marindin.*) That an experienced ganger would do a great deal by his eye, he has his cant on the part of the line that is not disturbed.

(*Mr. Harrington.*) This is a very particular place and curve, and the gangers are not very experienced men, as we have seen from the specimen here to-day.

(*Witness.*) I wanted to say there were a lot of these bolts about

1782. (*Mr. Harrington.*) You know these bolts that Mr. Hickson produced, did you see a number of them on the spot?—They were there, old and new, on the place, and there were some 50 people moving up and down.

(*Major Marindin.*) I may say for Mr. Adams and myself that we do not attach any importance to that.

1783. (*Mr. Huggard.*) Do you suggest that the super-elevation or cant, or whatever it is called, has been altered to something different to what it was before the accident?—I could not say whether on the bridge part the ends were not packed.

1784. I want to know if you intend to convey to the court that in your opinion it is altered to something different from what it was?—All I can say is that it appears to me——

(*Major Marindin.*) I think Mr. Harrington has said to me he did not suggest it has been altered, but that there was not sufficient precaution taken at the time to see that it was laid even with what it was before.

(*Mr. Adams.*) He gave one answer absolutely favourable to you that the cant was then the same as it is now.

(*Witness.*) I saw the men at work, and there was no spirit level or instrument by which the exact cant could be ascertained.

1785. (*Mr. Huggard.*) Then I understand the point of the evidence is a complaint of the company for not having proper instruments?—The point of my evidence is that I wish, as a resident of this locality, as a cess payer, and as one concerned for human lives as well as my own,—I wish that those should be made safe for public traffic at whatever expense it may be.

1786. I want to know if you are making a complaint against the company?—My complaint against the company would be too general.

1787. (*Major Marindin.*) Mr. Harrington explains what he means, that at the time there was nothing on the ground to show the men were laying the cant as it was before?—I must do them the justice to say they had plenty else to do, and they were not bound to produce it for me.

(*Mr. Adams.*) He has stated what he saw; was there a spirit level there?

(*Mr. Huggard.*) You must know you are stating a sufficient cause of complaint to make the company guilty of negligence and to fix persons with responsibility.

(*Mr. Adams.*) How can any negligence after the accident affect them?

1788. (*Mr. Morphy.*) You have stated that you consider this as a death-trap, and I quite agree with you. Major Marindin has suggested more than once that if the train only went round at the speed of 5 miles an hour it might go round safely. With the disposition to disobey orders to which we are all subject, do you think under any circumstances the trap ought to be allowed to remain?—I think not; if you have your cant so slight as to carry it round safely at 5 miles an hour the cant that would carry it at 40 miles an hour would topple the train into the river at 5 miles an hour.

(*Colonel Rowan.*) On going out to the ground that morning it occurred to me that the outer rail might be depressed, and I drew Mr. Hickson's attention to it, and we examined it carefully, the morning after the accident, and we could find no trace of any depression.

(*Mr. Harrington.*) Did you apply the spirit level?

(*Colonel Rowan.*) No.

(*Mr. Peet.*) I examined the cant and it was perfectly accurate.

(*Major Marindin.*) There was a gang relaying it after the accident?

(*Mr. Peet.*) They relaid part.

(*Major Marindin.*) Was it the regular gang?

(*Mr. Peet.*) A repairing gang, two gangs came together.

Had they a spirit level with them?—

(*Mr. Peet.*) I cannot answer that. Mr. Hickson was on the ground. The ordinary cant can be given without a spirit level with the eye.

GEORGE HICKSON recalled.

1789. (*Major Marindin.*) Do you know whether that relaying gang, relaying after the accident, had a level to take the cant?—No, sir; the cant was not altered at all, the sleepers were simply put in underneath when the old ones were taken out.

1790. As a matter of fact they had not a spirit level on the ground?—No.

1791. When was the first time you applied a spirit level after the accident?—On Thursday, the 25th.

1792. Would it be possible for a gang having portion of the curve laid to a certain cant to relay a portion which had been broken up to an even cant; would they require a spirit level to do it?—I think a good platelayer could do it himself without it.

1793. (*Mr. Harrington.*) You would not, I am sure, Mr. Hickson, commit yourself to the fact that the man we saw in the witness chair last evening was an experienced ganger?—He is not the man; Shea was the man.

1794. (*Major Marindin.*) He was the ganger of the platelayers in charge of that particular length, but this was a special gang sent out to relay ?—Yes.

1795. Who was in charge of that ?—I was in charge and Shea was under me. Shea was the next man to the man that was killed.

After an adjournment for lunch.

MICHAEL O'FLAHERTY SLATTERY sworn.

1796. (*Mr. Harrington.*) You acted for a time, I believe, as corporate director on the board of this railway company ?—For 12 months.

1797. I believe under the statute there was no provision for any representation of the Commission on the board ?—No, but the company required to cross the street, Rock Street, and the Town Commissioners would not give consent unless they appointed a corporate director, and I was selected by the Town Commissioners then to represent them on the board. After 12 months they thought to select one themselves.

1798. (*Major Marindin.*) Who did ?—The railway company not leaving the selection to the Town Commissioners, they thought to have their own nominee, and the Commissioners would not be satisfied unless they had the selection and appointment of one of themselves.

1799. (*Mr. Adams.*) Are you still the director ?—No; they allow no corporate director now, notwithstanding the guarantee of 6,000*l*.

(*Major Marindin.*) We are very unwilling to interrupt, but anything as to the general composition of the board or the general affairs of the company we have no warrant to hear at all.

1800. (*Mr. Harrington.*) We are not going into these things, I only wished to introduce Mr. Slattery to you. You have travelled pretty frequently by this line ?—I think, as the Commissioners say, Mr. Harrington, if you just allow me to give my evidence in accordance with what the rules of the inquiry are. I wish to keep close to it. While corporate director I was going to Dingle and from what I heard of this bridge and the curve, I walked from the junction round the bridge.

1801. The bridge and curve we are speaking of ?—Yes, and from what I saw, I saw there was no check-rail on at the time. From what I knew and learned the iron of the curve was likely to expand in warm weather, and I considered braces to the rails were necessary also. At the next meeting of the board of directors, which I attended, I brought this matter before the board, and I inquired from their own chairman, and he inquired, and Mr. Hickson replied, as to what amount of money was to the credit of that part of the contract with regard to the bracing of the curve preventing the rails expanding, and he found there was a large sum still.

1802. (*Major Marindin.*) Was that before the opening of the line ?—Before the opening of the line, a large sum was unexpended for braces. Mr. Hickson got instructions that there should be further braces put on. I was going to Dingle soon after the line was opened, that was February, and the line was opened in March, and I was going about the beginning of April. I travelled by the railway on this occasion, and although it was not a very inviting day got out at the junction and said I was anxious to see whether these braces were put on.

1803. Was this after the line was opened ?—Immediately after, and I got on the engine, being a director representing the Town Commissioners at that time, and I was touched on the shoulder and told that there were instructions given that I should not travel on the engine. I told my business what I wished to go for. The station-master came to me, John Fitz, and said that he got instructions not to allow me to travel outside on the engine. I told him it was not an inviting day to travel outside, but I wished to do my duty for the Town Commissioners and the ratepayers, and see that the bridge was properly stayed.

1804. (*Mr. Adams.*) Was it properly stayed ?—I would not be allowed, I was taken off the engine by the orders of the station-master.

1805. It was quite right to take you off the engine, no one should travel on it but the engine-driver ?—At all events I saw it the day after the accident, and not much better still than it was before, except one check-rail was on, the stays was not much better.

1806. (*Mr. Harrington.*) Can you tell whether that amount of money was expended during your time on the board ?—I could not say.

1807. Now you travelled also with Quinn on some one occasion on which he had to divide the train ?—Yes, Major Spring was the arbitrator on that line as well as on the Headford, I was on the Cahirciveen, and we travelled from the other side of Glen-na-galt: it was a special pigs train. I went to Annascaul by the ordinary train, and I travelled by the special back. We came to the foot of Glen-na-galt, the other side. This was a new engine by which the directors offered wonderful advantages to the public, an oil engine, worked by oil, and at the other side of Glen-na-galt it backed, and after repeated backings and slidings we were asked to come out and lighten the load. Ultimately Quinn came and insinuated that the wheels were greased or something. He made some insinuations, and I said, "The best thing you "can do is to take off the goods and come back for "us." We remained on the side of the road until he came back from the junction.

1808. (*Mr. Adams.*) You were not asked to shoulder the train up the hill ?—We were not.

THOMAS ALEXANDER GRAVES sworn.

1809. (*Mr. Harrington.*) What were you while you were in the employment of the company ?—I was locomotive foreman and occasional driver when circumstances required.

1810. (*Major Marindin.*) The position held recently by the poor man who was killed ?—Yes, precisely.

1811. (*Mr. Harrington.*) From what company did you come into the employment of this company ?—From the Kanturk and Newmarket; it is now incorporated with the Great Southern and Western Railway.

1812. It was not then ?—No.

1813. (*Major Marindin.*) Where did you come from before that ?—I had been at sea as a marine engineer, and before that I had been on the Great Southern and Western Railway; I have copies of my testimonials here (*produced*) from Mr. McDonald.

1814. Yes, I see 13 years on that line ?—I was longer than that, I served my time there; I was a pupil to the chief engineer, Mr. Miller.

1815. He says you were district superintendent, were you a driver before that ?—I had been driving; I acquired the knowledge of driving as a privilege; I was an indentured pupil, and it specifies I was to be taught the management and guidance of engines.

1816. You learned driving ?—I drove eight years consecutively on the Great Southern and Western Railway.

1817. As a driver ?—Yes.

1818. (*Mr. Harrington.*) When did you come to this line ?—About two months before the line opened.

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1819. How long did you remain in the employment of the company?—Until May 1892.

1820. That was altogether how long?—About one year and nine months.

1821. Did you drive frequently over the line?—I have driven trains 73 times. I have a record here.

1822. Was there a means of keeping a record in the office?—It is from private notes I took this; this is exclusive of taking single engines over it.

1823. (*Mr. Adams.*) Is that over the Dingle line?—Over the whole system, more frequently on the Dingle line, the main line.

1824. (*Mr. Harrington.*) When you were engaged it was by the directors?—Yes, by the company.

1825. When you were engaged by the company did you show them that testimonial certifying your capacity as a driver?—I did not, not before the board, but in communication with the manager, who was acting as secretary, who had a good recommendation from Mr. Ivatt, locomotive superintendent of the Great Southern and Western Railway.

1826. You know the position on the line where this unfortunate accident occurred?—Oh, well, I came over it many and many a time.

1827. Did you always consider it a point of danger?—Yes; I cautioned the drivers before the line opened. I told them that if they were ever to allow a train to get beyond five miles an hour, I said to them as we were passing over the bridge, "If you do you will go into that hole," and that is where they did go. At the same time I was braking the train down with the hand brake alone.

1828. Had you any instructions from the company as to the rate of speed down that incline?—None whatever, never got any; there is a general rule in the rule book which specifies the caution to be used in descending all inclines, but it did not mention that incline in the book I got. I never got but one rule book, one edition.

1829. Have you the book?—No, I left it behind me; but I can recognise it. (*Book similar to Quinn's produced.*) I never had one of those in my life, but a large red book (*identifies book*). I had seven of those. I gave one to each of the three drivers and one to each of the three firemen before the line was opened, and kept one myself. I never saw one of the pamphlets all the time I was on the line. I repeat that, and, moreover, I can produce a man who has acted in the capacity of a guard on the line who never had a rule book in his life of any description.

1830. You were in the employment of the company up to August 1892?—Yes.

1831. A report of General Hutchinson's was given to the company on 17th March 1891 regulating the rate of speed down this incline; do you tell the Commissioners that you drove engines frequently during that period down that incline?—I did.

1832. In the period intervening between March 1891 and your discharge in August 1892 do you tell the Commissioners that you frequently drove engines down that incline and over that portion of the line?—Yes.

1833. And all that time you never had a copy of any rule given by General Hutchinson regulating the speed down that particular slope?—No; I do not know whether General Hutchinson is the author of that book or not, but that is the only one I got.

(*Major Marindin.*) The order issued by the Board of Trade embodying the recommendations of General Hutchinson on the 13th May 1891 is the authoritative order.

1834. (*Mr. Harrington.*) Now glance at that order, do you see two miles an hour crossing Edward Street and Nelson Street, Tralee; read that down. Does not that apply to the bridge at Glen-na-galt?—It does, but I never got a copy of that.

1835. Did you during all the time you were in the employment of the company ever get a copy of that?—Never.

1836. Had you to sign for any rule book you got?—No, no one can produce a signature that I ever gave, but I got the signatures of the enginemen and firemen at the time that I gave it.

1837. You are quite sure that a copy of the rules you have read now you have never got?—No, as I say once for all I never got any but the red book.

1838. Either verbally or in any other way did anybody ever direct your attention, when driving engines there, or tell you to direct the attention of others, to the rate of speed approaching this curve?—No, no one ever did.

1839. Was it your judgment and experience?—My own judgment and experience that suggested to me what I said to the drivers. I also told the manager, Mr. Parkes, so. I told him; "If ever we have a runaway "on that you may as well close the gates and put up "a notice to let." He will remember that, I am sure.

1840. Had you any experience of the poor man who was on the line after you?—I never saw him in my life, but I knew where he came from.

1841. Might a man be a fitter all his life and yet not be competent to take an engine out?—Certainly, a man may serve all his time in building and repairing engines, and never would be capable of going as a driver until he had had actual experience on the road; he should first learn to be a good fireman and then afterwards be a driver.

1842. As a matter of fact, it was a portion of your apprenticeship?—It was. I can produce my indentures and let you see them.

1843. Did you answer an advertisement when you came into the employment of the company?—No, there was no advertisement. I heard they wanted a man of my description and I wrote to Mr. Parkes.

1844. (*Mr. Huggard.*) Are you familiar with this paragraph: "That owing to the neglected state in "which we find our locomotives we dispense with Mr. "Graves' service and that he receives a fortnight's "pay up to the 27th August?"—Yes, I remember that, but it was not given to me in that way. I will show you the secretary's letter.

1845. You recognised the resolution when you heard it?—I do, but it was a misrepresentation because the engines were in a better state than they are now. I had only one man to assist me and they have five or six now.

1846. Were you dismissed on those grounds?—That was what was said.

1847. Have you at any time since then made overtures for getting back into the company's service?—Never.

1848. Do you swear that positively?—I will. Never, either by word of mouth or in writing.

1849. Beyond this slip of paper beautifully printed, and headed "Testimonials," can you produce any certificate to you that you are a competent driver?—I can by referring to the books of the Great Southern and Western Railway.

1850. We are not in a position to do that; can you produce any testimonial that you are a driver?—I could, but I have not it here. I never asked for it; it was patent to everyone. I can produce men who saw me driving.

1851. Is not your insinuation here that a man ought to have such a testimonial?—No, I do not insinuate anything of the kind.

1852. Then a man ought not to have it?—Oh, he should have it.

1853. Did you ever get one?—No, I will tell you how it is.

(*Mr. Adams.*) I beg your pardon, all he said was that a man may be a competent locomotive fitter and still not able to drive an engine.

1854. (*Mr. Huggard.*) I understand that very well, but the point I want to arrive at is that there is not on the Great Southern or any other railway, so far as I am aware, a practice of certifying a man as a driver; this man, with all his experience, and it is long, has not got one. We say that Redshaw came from the Great Northern in the same way, and did not get one because there is no such practice?—Ordinarily speaking, engine-drivers are trained on the lines on which they work, they begin as firemen and remain for six or seven years.

1855. (*Major Marindin.*) Begin as cleaners, do not they?—Sometimes they do and sometimes as fitter's assistants.

1856. (*Mr. Huggard.*) Assistant firemen and then firemen?—And after a time, if he conducts himself satisfactorily, the locomotive superintendent may promote him as driver. The responsibility rests with the locomotive superintendent, who is the best judge of whether they are fit or not; that is the certificate.

1857. As a rule now before a man is in a position to fill the post of locomotive superintendent, he must be able to tell whether another man can drive or not?—He must. A person in the position of a locomotive superintendent, before he appoints a man to drive a train, must be competent and should be competent to know whether a man could drive or not.

1858. Should he himself be able to drive a train?—He should.

1859. You say you were eight years training on the Great Southern and Western Railway?—I was eight years acting as a driver, leaving training out of the question.

1860. I do not want to do that; before you became driver what experience had you?—I was a fireman.

1861. For how many years were you a fireman?—About nine or ten months.

1862. Do you mean to say you developed into a driver in nine months?—I did, and the reason was because I had served my time to the construction and building of engines and as a mechanical draftsman, but the cleaners or firemen do not do that. It is well known that a man who is capable of constructing an engine or repairing one——

1863. That is a fitter?—Yes, requires less practice as a fireman.

1864. A man who is a fitter can more quickly and more readily and more properly learn to be a driver than an outsider?—Undoubtedly.

1865. And you would say that nine months upon an engine as a fireman would be sufficient to make you a driver for that great system, the Great Southern?—It did so.

1866. And you thought you were a competent driver?—I did not, but those who were my superior officers did.

1867. You did not?—It was not left to me, but the persons who placed me in that position were.

1868. And you all agree that you were competent, and I do not dispute it?—I never killed any person, nor did I on the Dingle Tramway ever kill anything. Your phrases are ironical.

1869. I say you are a most competent driver?—Better judges than you have said that, and not on a miserable system like this.

1870. You suggested your going to the inquest?—I was told to come here.

1871. Who brought you here?—I came here this morning, and as I have no status I went away. I was told I might be wanted.

1872. Who brought you to the inquest?—I had an interest in it, the same as the general public.

1873. Will you swear you did not communicate your evidence to any solicitor or engineer as a witness against the company?

(*Mr. Horgan.*) I object to that, that is privileged.

(*Witness.*) When?

1874. (*Mr. Huggard.*) Before the inquest?—I did not.

1875. At the inquest did you hear the evidence of Mr. Parkes?—I did not. I took so little interest in the thing that I went away after my own evidence.

1876. I suppose you thought that was the important part, at any rate Mr. Parkes swore that with his own hands he handed you a bundle of these books?—That is untrue.

1877. And if he comes up again and swears it, it will be untrue also?—He can swear it.

1878. In any shape or form, in any printing was this matter communicated to you, the contents of this book?—When?

1879. When you were in the company's service?—I never saw the rules contained in that.

1880–1. In no shape or form?—No, until now.

1882. Did you ever see that document (*produced*)?—Yes, I saw that posted on carriages, but I never got a copy of it.

1883. Was it posted on the engine you were driving?—No.

1884. Are you not aware it contains the same rules as in the books?—No, I never saw that book, and therefore never could compare it.

1885. Did you ever take the trouble of reading that?—I read it through.

1886. What was it posted in the carriages for?—I could not say, except that the passengers, when they stopped on the road, might while away the time with it.

1887. This is a very important matter; were you not locomotive superintendent on this line?—Well, practically speaking, I was locomotive foreman with my coat off and sleeves turned up, and one man to assist me.

1888. Were you not in charge of that department?—I had nothing to do but simply repair the engines.

(*Mr. Adams.*) Does that paper contain the passage about five miles an hour?

(*Mr. Huggard.*) Yes.

(*Mr. Adams.*) Then he read it and there is an end of it, whether he got it in black or brown.

(*Mr. Harrington.*) He does not give evidence that he got it.

1889. (*Major Marindin.*) He says he never saw any rule regarding any relaxation of speed at any point; he now admits that he has read that yellow document through?—Yes, but in the rule book it does not refer to the incline.

1890. (*Mr. Huggard.*) If I was not interrupted by Mr. Harrington, I was going a step further. In your position as locomotive foreman you were over the drivers, and if a driver had to be sent out at any moment you were the man to send him?—No, the manager appointed them. I can show copies of his letters appointing them.

1891. I know the appointment, but who arranged for each driver on each particular morning?—There was no arrangement made every morning, the drivers were fixed in their particular runs, and if there were any specials, or if a driver fell sick, the manager appointed a man in his place and told me of it.

1892. Did you not tell us you were instructing different drivers as to the speed coming down the hill?—Before the opening of the line.

1893. Did you call their attention to the fact that they ought not to come down the hill at more than five or six miles an hour, you thought?—Before that paper you have in your hand was printed.

1894. What is the date of this?—I do not know.

1895. How do you know it was not printed?—It was not posted in the carriages until long after the line was opened.

1896. When would you say this was posted?—I should say I have not seen it for fully six months after the line was opened.

1897. To say that it would be posted in the carriages before the line was opened would be untrue, and anyone who swore so would be telling an untruth?—I mean a day or two before, when the line opened everything should be ready and properly prepared.

1898. When did you leave the company's service?—12th August 1892; I told you that before.

(*Mr. Huggard.*) The date of this is 13th May 1891, which is within a month of the time the line opened.

1899. (*Mr. Morphy.*) Do you consider that if you had been driving the train that day you would have saved it?—I do consider that if I had been driving the train the occurrence would not have taken place.

I would not have descended the incline at the speed the guard says.

1900. Could such a thing occur as a runaway train? —Yes, from the incompetence of the driver.

1901. That is not quite fair, because my question included other accidents?—Do you mean a train to run away like a horse would run away?

1902. Yes?—I never heard of it.

1903. Could such a thing occur as a train getting out of control without the fault of anybody?—I do not think so, I never heard of it, and I have travelled over the principal lines in Great Britain and Ireland.

1904. Do not engines get wrong suddenly?—Not always.

1905. I am not saying always, I said sometimes, on a sudden?—A thing may be wearing out from day to day before it shows any signs.

1906. Precisely so and many other reasons?—Sometimes the thing will snap suddenly.

1907. Poor Redshaw took your place?—He did; he did not immediately succeed me, another man did and he left.

1908. He occupied up to his death the position you had been dismissed from?—Yes.

1909. And the pith of your evidence here to-day is—no one can be misled—that he was the cause of the accident through incompetency or otherwise?—I would say the man was incompetent from want of experience.

1910. That is your generous evidence?—I am sorry for the man.

1911. You have stated to the court you consider an efficient fitter would in a short time acquire——?—He would if he was intelligent.

1912. Acquire the practice of an engine-driver, do you infer Redshaw was not intelligent?—I never saw the man; but he never had any driving experience prior to his coming here, it is contrary to the practice of the Great Northern. I have been a district superintendent of a railway myself and made my own drivers, and I can prove that no locomotive superintendent on a line like the Great Northern will ever take a fitter from the workshops and put him to drive a train, no matter how competent he may be.

1913. Did you ever hear of a runaway engine on the Great Southern and Western Railway?—There might have been since I left.

1914. What part of the engine is the throttle valve? —I never heard of such a thing on a locomotive.

1915. Did you ever say yourself that through a throttle valve getting wrong an engine on the Great Southern and Western Railway had run away?—I never heard of such a thing on a locomotive. I have on a marine engine or a stationary engine.

1916. Did you ever say to Mr. Peet that owing to the throttle valve on the engine getting choked it ran away?—I never remember.

1917. Will you swear you did not?—I will not swear I did not, but if I said it it was only in fun; I will not swear I did not say it.

1918. If you did it was a joke?—It was because there is not such a thing on a locomotive. Might I ask Mr. Peet did I say it? It seems to me ridiculous.

1919. I think you told us at the inquest, assuming that the engine and the train got out of control owing to the slipperiness of the rail, you stated at the inquest that if it had gained that high rate of speed from any cause, whether the wheels were revolving or not, when it came to the curve it was bound to go off?—Certainly when it acquired a speed of 40 miles an hour.

1920. Therefore, assuming that through any unavoidable cause that velocity was got up, you do not believe that the engine-driver by any manipulation of the brakes could have saved the train?—I told you what I conceived was——

1921. (*Mr. Adams.*) Do not you agree that if by some cause or other, it matters not what, the train got a velocity of 40 miles an hour no human being could save it?—No human being could save it.

1922. (*Mr. Morphy.*) Or 30 miles?—Or 30 miles. If he started from the top of the bank at a speed of 10 or 15 miles he could not have got round safely.

1923. What is the least rate of speed at which it would have been impossible to save the train?—I know the permanent way was good from my own experience. I have not seen the place since the run off, but I know the place very well indeed; it is an S curve, a curve to the left first and then to the right. It shows the permanent way must have been in good order when at that high rate of speed he came down that incline and went 75 feet on the curve before he went off.

1924. That is not my question. My question is what is the least rate of speed going round that curve at which you say it would be impossible under any circumstances to save the train?—He could go round it at 10 miles or 15.

1925. That is not my question; it is the reverse. If the train was going round at 30 miles an hour, would it be possible to save it?—I do not think it would.

1926. It it was going round at 25 would it be possible?—It might if the permanent way was as good as it is.

1927. (*Mr. Harrington.*) I have a copy of Mr. Ivatt's report here, but first I should like to ask you were you, as a matter of fact, summoned to the coroner's court?—The coroner sent for me; he told one of the constables to tell me that the jury wanted me.

(*Mr. Harrington.*) Now I will read the report of Mr. Ivatt as to the state of the engines, which I have now got:—

Great Southern and Western Railway,
Locomotive Engineer's Office,
Inchicore, Dublin,
January 28, 1891.

To the CHAIRMAN and DIRECTORS of the Tralee and Dingle Light Railway.

GENTLEMEN,

I INSPECTED the rolling stock of your railway at Tralee on January 23rd.

Engines.

No. 1.—The flanges of the trailing wheels are worn sharp, and ought to be turned before the engine is allowed to work; this will necessitate the turning up of all the coupled wheels.

The flange of left wheel of pony truck is also very much worn, and requires turning.

The pony truck on this engine sets to the left, the left wheel being worn very much more than the right.

I recommend a careful examination of the traversing arrangement of this truck when the engine is lifted.

It is of the greatest importance that the pony trucks on these engines should be kept as free as possible, otherwise grinding away of the wheel flanges will result.

The vacuum brake on this engine is not in satisfactory order, and should be overhauled.

No. 2.—The flange of the left trailing wheel of this engine is worn too sharp, and should be turned up before the engine is used. This will require the turning up of the whole of the coupled wheels as in No. 1.

The right wheel of the pony truck is worn, and should not run many miles before being turned. The truck on this engine is inclined to bear to the right, just the reverse of that under No. 1, and my remarks about the trucks being kept free to radiate apply with equal force to this one.

The vacuum brake on this engine I found to be in fairly good order, with the exception of the left brake cylinder which leaks off in three or four minutes.

No. 3.—The tyres on this engine are in good order, and do not require turning. The slide blocks are slack and ought to be lined.

The vacuum brake is defective and requires overhauling; the small ejector, when tried on the 23rd, would only maintain 16 inches of vacuum with 130 lbs. pressure of steam.

The levers on the brake shaft require adjustment at present, the left lever is in advance of the right, and consequently the vacuum pistons do not rise equally.

No. 4.—This is a somewhat different type of engine, and has apparently done very little work.

The vacuum brake requires overhauling, it is not fit to work in its present state; the small ejector will not maintain 10 inches of vacuum with 100 lbs. of steam, and the left vacuum cylinder is stuck, or not working.

With respect to the engines generally, they are in good working order, except as regards the items mentioned above. I was not able to make a close examination of the boilers, and this was not necessary in view of the examination just made by the Boiler Insurance Company.

The most serious repair required is the turning of the wheels on engines Nos. 1 and 2.

With regard to the vacuum brake on the engines, probably taking to pieces and cleaning and adjusting the various parts will put matters right, but this should be done before the engines go to work.

The cow-catcher on No. 4 was the only one I saw in position, this stands rather too high over the rail.

I would recommend that two pieces of plate be bolted on just over each rail, somewhat as shown on the sketch herewith, so as to come within about two inches of the rail; the same thing should be done with the other cow-catchers if they stand as high over the rail as that on No. 4.

The paint on all four engines is bad, and the speed indicators on all are more or less out of order

The hanging covers, or screens, round all the engines are loose and badly fastened at the hinges, and the bottom catches, and in some instances the screens themselves, require overhauling and repair.

Details, such as missing side chains, sandpipe off No. 3, or missing rings for driving speed indicators, should be replaced.

Coaching Stock.

The carriages are new and have not yet run.

Waggon Stock.

The wheels under nearly all the waggons are in very bad condition, from being worn and having flat spots on the tyres, and those under the following waggons ought not to be allowed to run without being turned. Waggons Nos. 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25. The same remarks apply to the wheels under both the long bogie timber waggons.

Vacuum Brake.

The automatic vacuum brake as fitted to your stock will, if kept in proper working order, enable the trains to be handled quite satisfactorily on the steepest gradients of your line.

I had an opportunity of trying a train of four waggons and four carriages upon a gradient of 1 in 30.

On testing the brake on four waggons and eight carriages (made up as one train), I noticed that the vacuum cylinder on the third-class brake van was not working, and that the brake leaked off one of the composites, and also off three of the waggons sooner than is desirable; on the remaining vehicles the brake held tight for an hour after its first application.

All the vehicles, carriages, and waggons require to have wire cords attached to the release trigger of the vacuum brake, and brought out to each side of the vehicle, so that on pulling the cord the brake can be released by hand when required for shunting.

I am, Gentlemen,
Yours faithfully,
(Signed) H. A. Ivatt.

Locomotive Works.
Inchicore, January 28, 1891.

1928. You knew this engine?—I did.

1929. Were you acquainted with it before it was taken over from the contractor?—Yes.

1930. Can you tell me whether all the repairs specified in that report were done to the engine?—They were under my supervision, the wheels were turned up, and I myself freed the pony truck with my own hands.

1931. Can you give the Commissioners some idea of the vacuum brake? Was it constantly going out of order?—Well, not very frequently, but sometimes there would be leakages in the vacuum tubes, and that would affect it considerably; they have that everywhere.

1932. So early at all events as the time at which it was taken over from the contractor, the attention of the company was directed to the condition of the vacuum brake?—I must explain that during the contractor's time they never used the vacuum at all; they had the hand brake on the engine, and the waggon stock was not fitted with the vacuum cylinders, some of them were, but it was not in working order, so during the contractor's time they never used it, so they told me, and I believe from the appearance of the waggons they were telling me what was right. The men engaged in the construction used to what is technically termed sprag the wheels, they would take an iron bar and stop them.

1933. You did not drive that engine yourself very frequently?—I have driven every one of them, and I can find the numbers and dates.

1934. Hit on one date on which you drove that engine, No. 1?—I find on this list that I only entered the dates; I did not enter the number of the engine, but I can let you have it.

1935. You were asked some questions by Mr. Huggard as to the position of a locomotive superintendent, as a matter of fact in the sense in which a locomotive superintendent is understood on a railway line; were you ever locomotive superintendent?—No.

1936. Was your successor?—I believe he was. I believe he never took his coat off. I heard so. He never had occasion to work.

1937. He had several men under him?—He had seven or eight.

1938. There is a clear distinction between a locomotive superintendent and a foreman?—There is.

1939. (*Mr. Huggard.*) You identify this document, your own report, as to what was done to engine No. 1?—Yes.

Date.	List of Repairs done to No. 1 Engine up to and including June 4th.	Time.
April 4	Disconnecting motion - -	½ day.
„ 5	„ brake mounting and dome-joint.	1 „
„ 6	Taking out trailing wheels -	1 „
„ 7	Taking out driving wheels and lifting engine.	1 „
„ 8	Lifting engine to take out leading wheels.	½ „
„ 8	Self-drove 10.15 a.m. to Dingle and back.	—
„ 9	P. Coleman, fitter, fired 10.15 a.m. to Dingle and back.	—
„ 11	Repairing No. 5 engine.	—
„ 12	Repairing No. 2 and 5 engines.	—
„ 13	Taking out leading and pony truck wheels, and repairing tools.	½ day.
„ 14	Repairing Nos. 5 and 3 engines.	—
„ 15	Taking off exhaust pipes, and taking out pistons.	1 day.
„ 16	Repairing No. 5 engine.	—
„ 18	Repairing ash-pan dampers, front and back.	½ day.
„ 19	Taking centres of horn blocks and repairing tools.	1 „
„ 20	Repairing No. 2 engine.	—
„ 21	Repairing No. 2 engine and No. 4 engine.	—
„ 22	Repairing No. 2 engine and No. 4 engine.	—
„ 23	Taking down brake shaft, &c., marking out driving axle boxes.	1 day.
	Total time worked out at No. 1 engine, from 4th to 23rd April -	8 days.
„ 25	Self and P. Coleman worked 10.15 a.m. to Dingle and back.	—
„ 26	Taking off brake levers, fitting brasses on pony journals.	1 day.
„ 27	Putting in pony truck and leading coupled wheels.	1 „

Date.		List of Repairs done to No. 1 Engine up to and including June 4th.	Time.
April	28	Self worked 10.15 a.m. to Dingle and back.	—
May	2	Fitting two new brasses in leading axle boxes. Straightening brake shaft and repairing tools.	1 day.
,,	3	P. Coleman firing 10.15 a.m. Self repairing No. 5 engine.	—
,,	4	Repairing and grinding plug of blow-off cock, and fitting leading axle brasses.	1 day.
,,	5	Repairs to No. 5 engine. Making gauges for driving axle boxes, and fitting new leading axle brasses.	1 ,, ¾ ,,
,,	6	Dressing tools, and fitting new leading axle brasses, and taking off trailing sand boxes.	1 ,,
,,	7	Fitting brasses in both leading axle boxes. Fitting new driving axle boxes in horn blocks.	1 ,,
,,	9	Fitting new axle boxes in horn blocks.	1 ,,
,,	10	Taking down both vacuum cylinders for repair. Chipping and filing new driving axle boxes.	1 ,,
,,	11	Chipping and repairing steam gauge and pump No. 5 engine.	¾ at 1 ¼ at 5
		Total time worked at No. 1 engine from 25th April to 11th May - - -	10½ days.
May	12	Fitting right-hand driving axle box, and facing horn blocks and taking centres of engine.	1 day.
,,	13	Freeing adjusting screws, fitting key in new brake lever and re-erecting same. Fitting left-hand driving axle box.	1 ,,
,,	14	Freeing adjusting screws, and fitting up new brake blocks.	1 ,,
,,	16	Taking down back of cab to get out regulator spindle; repairing and re-erecting vacuum cylinders.	1 ,,
May	17	Putting in leading axle boxes and vacuum wheels, and fitting liners on leading axle boxes. Tightening bolts in sand-pipe stays, No. 5.	¼ at 5. ¾ at 1.
,,	18	Taking centres of driving and trailing axle boxes, lifting engine and putting driving wheels under engine and fitting new bolt in trailing spring bracket and dressing tools.	1 day.
,,	19	Fitting in cross-head of right-hand slide bars, and trailing axle boxes, drilling broken spring pin out of spring link bracket. Clack box joint of injector made.	1 ,,
,,	20	Fitting new brasses on driving journals, fitting new liner on cross-head, fitting studs, bar bracket and tapping nuts.	1 ,,
,,	21	Putting driving wheels and lowering engine.	1 ,,
		Total time worked at No. 1 engine from 12th to 21st May.	8¾ days.
May	23	Fitting up cross-head and slide bars and putting in piston and glands right-hand side. P. Coleman, fitter, firing a special train from Dingle this day.	1 day.
,,	24	Putting in trailing wheels and lowering engine.	1 ,,
,,	25	Re-setting bearing springs, and fitting piston rings.	1 ,,
,,	26	Re-setting bearing springs, and fitting handle on new end of regulator spindle. Repairs to No. 2 engine.	½ ,,
,,	27	Screwing bolts and making dome and mud-hole door joints, and preparing for boiler inspector.	1 ,,
,,	28	P. Coleman, fitter, fired 5.0 a.m. Special to Dingle and back this day. Self making cramp bolts for safety-valves and making regulator stuffing box joint.	1 ,,
,,	30	Erecting bearing springs and new feed pump.	1 ,,
		Total time worked at No. 1 engine from 23rd to 31st May -	5½ days.

In addition to the repairs described in the annexed list, the following renewals have also been effected, viz.:—Two new driving axle boxes and brasses, two new leading axle brasses, two new slide bar cross-head liners, one new feed-pump and ram, six new spring pins, three new bearing springs, 12 new adjusting screws for springs, one new brake lever, and new end on regulator spindle. This engine has now been 32 days undergoing repairs; eight of this time both my assistant and I have been working trains, showing the actual time spent in repairing No. 1 engine, 28 days. There are 20 or more old tubes to be taken out of the boiler, and a corresponding number put in; blast pipes to be taken out and replaced. Cab to be repaired, and tank to be cleaned out altogether. I should say about three weeks' work will be required to complete this engine.

T. A. Graves,
Locomotive and Carriage Foreman.
June 6th, 1892.

To R. A. Parkes, Esq.,
General Manager.

1940. (*Major Marindin.*) You said, I think, that you cautioned the drivers passing that curve not to go round it at a greater speed than five miles an hour?—Not to descend the grade from the commencement.

1941. Would you consider it was safe to run round that curve at five miles an hour?—Oh, yes; quite safe.

1942. Have you ever driven No. 1 yourself?—Yes, every one of them.

1943. What class of engine was she?—She was as good as any of the three of that class.

1944. You said you were braking the train down with the hand brake only?—Yes.

1945. Were you able to brake the train down with the hand brake only to control the engine?—Yes.

1946. What weight of train?—I have had as many as eight waggons and a third class brake behind.

1947. And you have brought a train down that incline with only the use of the hand brake?—And pinned down waggons.

1948. It was given in evidence by somebody here that the train started from a rest at the top of the hill?—Yes.

1949. But she started smarter than usual, and the vacuum brake was fully applied after she had run 20 or 30 yards?—She would get into speed very fast.

1950. What speed would she get in 20 or 30 yards? —She would get into double the speed of starting.

1951. She started at nothing?—I thought you said five miles an hour.

1952. She started from rest, and before she had run 20 or 30 yards the vacuum brake was applied full power?—She could not have acquired very great speed in that time.

1953. What would you expect from an engine after running 20 or 30 yards and the vacuum brake was put on full power?—I should expect she would stop.

1954. We heard the train broke down coming up the incline, because she had not sufficient steam, or it was implied she had not sufficient steam; supposing a train had not sufficient steam to pull her load up the incline, would that make the brake inoperative going down the other side?—It would; she would not have any vacuum.

1955. If he had not sufficient steam to pull the train up, might there not be enough left at the top to blow up his vacuum?—He would want at least 100 lbs. of steam to the square inch to form a vacuum equal to 7 lbs. the square inch.

1956. He would want 100 lbs. of steam still at the top?—Yes. That would be modified by the state the ejector would be in, whether it was in good order or not, and the state of the pipes.

(*Mr. Morphy.*) You of course, sir, will make a report on this accident, and form the best opinion you can as to its cause, but, whatever report is made, there will always be some doubt as to the cause of the accident.

(*Major Marindin.*) There will no doubt at all as to the cause of the accident, there may be a difference as to the *causa causans*.

(*Mr. Morphy.*) What I would suggest to you is to hear from Mr. Peet what it was Graves told him was the cause of the runaway train on the Great Southern line, because it may be the cause now. I will show he stated it in all seriousness.

(*Mr. Harrington.*) You know sufficient of engines to know whether there could be any serious meaning in attributing it to a throttle valve?

(*Mr. Morphy.*) That may be a nickname for a part of the engine.

(*Witness.*) Mr. Parkes swore he gave me a rule book, one of those little pamphlets. I say he never did. I have sworn it, but at the same time to show that he might have made a mistake in my case as he did in the case of another, I can produce a man who has acted in the capacity of a guard on the line who has never had a rule book of any kind.

(*Mr. Morphy.*) I propose to ask Mr. Peet as to whether Graves, who has posed here as an experienced engine-driver, has recounted to him an incident on the Great Southern line of a runaway engine going off and could not be controlled.

HASTINGS PEET sworn.

1957. (*Mr. Morphy.*) You know what I have been discussing with the court?—I will explain the matter. Mr. Graves and I were looking at the plan of an engine one day, and he was showing me the arrangement of the lever in the dome, and he said that the engine on the Great Southern line got stuck from the pressure of steam on the regulator valve and ran away from somewhere about the junction to Cork; they could not get it back from the pressure; he could not shut off steam from the pressure.

1958. (*Major Marindin.*) He told you that an engine ran away because a driver could not cut steam off; it is perfectly natural?—He could not move his regulator.

(*Major Marindin.*) It is not suggested that this man was running down the hill with steam on.

(*Mr. Harrington.*) The only thing that Graves disavows is the throttle valve

1959. (*Mr. Morphy.*) It was not a joke?—No; I do not think so.

(*Major Marindin.*) There are one or two returns I want the company to give me, the drawing of the engine, the diagram of the train made up, and the weights.

(Mr. Huggard asked that the report of the inquiry shall not be made public until after the trial of pending actions against the company.

(*Major Marindin.*) My duty ends when my report is made, and any suggestions as to withholding the report should be made to the Board of Trade.)

The inquiry was adjourned to next morning.

Saturday, June 10th, 1893.

The Inquiry was resumed at half-past 9 o'clock.

WILLIAM DARCY sworn.

1960. (*Major Marindin.*) You are a schoolmaster, are you not?—Yes, sir.

1961. Living at Dingle?—I live at Dingle.

1962. And on the day of the accident you were in company with ——?—I made a little sketch of it (*produced*). I was standing in that position on the road about 20 minutes to 5 on the day in question, Whit-Monday.

1963. Perhaps you will make your statement then? —I was standing on the road about 20 minutes to 5 o'clock when I heard a train coming rapidly west of Barry's house in Camp. I was struck with the rapidity with which she was coming, and I said to McDonald that I would never get to the station before she reached it. He said: "You will be in plenty of time."

1964. You were going towards Camp Junction?—Yes, to get into the train at the junction. Then I heard a whistling from the engine, I heard three or four terrible puffs from the funnel of the engine, not rapidly, but very slow and deliberate. Then she came on and got into the wood, the great noise ceased to my ear partly there. Then I heard the emission of steam from the engine with great noise and force. Then she reached the bridge, and she went over with a terrible crash. I saw the long carriage that is there on the embankment at present go over it. I saw the van that was at the top of the wall twirled round and stand transversely across the line. Then I came on with all the power I had to the junction. I got at the junction to the man with the telephone, and we telephoned instantly to Tralee, and in a moment had a reply back. A man rushed up to the room and I put a red flag in his hand and told him not to draw breath until he got beyond Barry's house to stop Quinn, who was coming on. But I am glad to say that O'Leary had done that also. But if poor O'Leary had been killed or forgetful of his duty, the man I sent would have reached also, because I saw him shortly afterwards with his flag in hand rescuing people. I went out on the platform and saw the Castlegregory train

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coming up, and I held up my hand; the engine driver stopped on the spot; Mr. Hamilton, the sub-inspector, and Mr. Goodwin and Mr. Eagar, another Tralee gentleman, were in the train. We held a hasty consultation, and decided to take back the engine and two carriages to the wreck and bring the wounded with all haste to Tralee. These gentlemen worked like giants that day; they had great strength and worked well and were of great use. So that I should say probably in between 25 and 30 minutes the wounded were on their way to Tralee.

1965. You seem to have given great assistance, Mr. Darcy, and I am sure everybody is very much obliged to you. Where did you first see the train?—I first saw the train going over.

1966. You never saw it before; it was hidden from you by the trees and village?—Yes.

1967. Now, you said you heard a great noise?—Great rattling.

1968. Then puffs?—Deliberate puffs from the engine.

1969. That is before the engine had got to Barry's?—Exactly.

1970. And after it had passed Barry's and the wood, you heard some more steam blowing off?—Then I heard the great steam seething out of the valves.

1971. What were the first puffs you heard?—That would be out of the engine.

1972. Where do you think the other steam came from?—Evidently from the pipes, because they are low down.

1973. You could not see it?—I saw it rising, going up through the trees, and there was none of this steam up out of the chimney.

1974. (*Mr. Harrington.*) You were on the line after. I suppose you looked at the line and the rails?—Yes.

1975. Did you and the other gentlemen who came on so soon make any endeavour to find out the point at which the train went off?—Oh, no, sir. My mind was taken up with the wounded and dying, and I did not pay any attention to the line.

1976. You could not give any evidence as to whether it touched the check rail or not?—No, sir.

1977. From what you caught of the train descending could you form an idea whether the train lifted and overturned off the line or jumped off?—The train went down in a straight line, the engine did not come to the bridge at all, she went off in a straight line, like a shot, like a thunder-bolt across the river.

1978. You did not see that?—I did not see the engine exactly, but I saw the place afterwards where it went off in a straight line.

James Murphy sworn.

1979. (*Major Marindin.*) What are you?—Carriage examiner.

1980. How long have you been in the service of the company?—Since the line opened.

1981. Where were you before?—With the contractor.

1982. In what capacity?—At the reconstruction of the rolling stock, that is to say, putting on the vacuum brakes.

1983. You were employed on the rolling stock, not on the line?—Not on the line, sir.

1984. Where did you receive your training with regard to carriage examiner?—I had something about eight years' experience with various contractors.

1985. Not on a railway company?—Not on a railway company, but the stock is nearly similar.

1986. What are your duties with regard to the carriage stock?—To examine them and adjust the brakes, in fact to be guided by Mr. Redshaw what to do.

1987. You were under Mr. Redshaw?—Yes.

1988. And your duty was to examine the brakes and brake gearing on the carriage stock?—Quite so; everything that was done was by his supervision and orders, nothing was done without acquainting him.

1989. When did you last yourself examine the carriage and waggons that were in that train to which the accident happened?—The weightier part would be about a day or two.

1990. Then the other ones, when do you think you examined them?—As a matter of fact, every train that comes into Tralee is examined the moment they come in and before they go out in case they would meet with any accident in the yard.

1991. When you last examined these vehicles in what state were they?—They could not be better because the brakes were fresh adjusted.

1992. Can you tell me what distance you put your brake blocks from the wheel?—I generally put each block, when I do adjust them, I put each block something that you could get 1*s.* or 6*d.* between the blocks.

1993. Less than one-eighth of an inch?—Yes, so that they will just come loose to the wheel.

1994. How far do you let your brake blocks get worn before you readjust them?—Do you mean renewing the blocks?

1995. No, putting them closer, re-adjusting them?—I would not like to leave the whole set get half an inch all round. I would not like to let them get further.

1996. Have you since the accident measured the blocks upon any of the carriages or stock belonging to this train?—There would not be any possible way. I was sure about the distance of them.

1997. Have you?—I could not do it, because they are broken up.

1998. Oh, dear, no, take the carriage that is on the bank, have you looked at the brake blocks on that?—I could not well; they are broken up; they are strained you could not form any idea.

1999. As to the guard's van?—That was perfect as far as the adjustment.

2000. What was the distance of the blocks?—You might get a penny in between the blocks, but the hand brake got locked in the road; you could not shift it; the hand brake had to be cut away and also the blocks the same.

2001. In your opinion the brakes on that train so far as the carriage stock was concerned were in good order?—He could not have a better brake than he had; it was impossible to give it to him; they were all fresh adjusted.

2002. And all the other parts of the stock in good order?—Yes.

2003. Are the blocks timber?—I think they are cast metal.

2004. (*Mr. Harrington.*) Do you know anything about engine driving yourself?—Oh, no.

2005. You have heard a good deal of the evidence given here; you have heard the thing discussed as to how that train was unmanageable coming down the hill; could you form any opinion as to the reason of that run down if the brakes were all right and the carriages all right?—I could not; if I was there I would not like to offer an opinion.

2006. (*Mr. Horgan.*) Would not wood blocks be safer coming down that hill than metal blocks?—I do not think so.

R. A. Parkes recalled.

2007. (*Major Marindin.*) On March 2nd, 1891, the company gave an undertaking as to the working, did they not?—I understand so.

2008. And the undertaking was to this effect: "That the said main line at Camp and Castlegregory "shall be so worked that only one engine in steam or

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"two or more coupled together shall be at one and "the same time on the section of line, one between "Tralee and Camp Junction, one between Camp "Junction and Aunascaul and one between Aunascaul "and Dingle." That is so, is it not?—Yes.

2009. "Such engine to carry a distinct staff for each of the said sections." That is so?—Yes.

2010. And under that undertaking no train is allowed to follow another into one of the sections with a ticket. There is no mention of a ticket in that?—There is no mention of a ticket.

2011. Can you tell me what happened subsequently about the use of a ticket?—We had a correspondence with the Board of Trade. A question had arisen owing to a special that was sent to Castlegregory, at the late inquiry before Major-General Hutchinson, and he raised the point as to how we were able to get the special to Castlegregory, another train following, and that led to a correspondence, and we explained to him that we gave a ticket to the previous train and cleared the second by telephone, and let the next train follow with the staff. I understand the secretary then got an arrangement with the Board of Trade by which we could use a ticket.

(*Mr. Harrington.*) I think it would be very satisfactory if we could have that; there is no telephone on this section.

2012. (*Major Marindin.*) What happened; did you get the authority to use a ticket with the train staff?—We did not up to the present actually get that authority, except that late letter from the Board of Trade. (Reads letter of 13th August 1891. *See* page 139 of this report.)

2013. You see you must be informed by telegraph that the previous train has cleared the section which is about to be entered?—Quite so.

2014. On that apparently you took to issuing tickets?—Yes.

2015. Had you a telegraph?—We were in the habit of blocking the section.

2016. Never mind, had you a telegraph by which you could be informed from one station to another that the previous train had cleared the section; is there such a thing as a telegraph on the line?—Only from Tralee to Camp.

2017. Is there such a thing on your line?—A telephone.

(*Major Marindin* reads letter from the Secretary of the line to the Board of Trade, dated 1st May 1893, and the reply of the Board, dated 6th May 1893.)

2018. (*Major Marindin.*) So that until you established block working or telegraphic working you were not entitled to issue tickets, and that undertaking was not accepted?—Yes.

2019. In answer to that you wrote to say that you have decided not to run special trains except with the staff until something definite is arranged, that is dated 24th May, subsequent to the accident. So that as a matter of fact the train that Quinn was driving, I take it, was the last train run upon your line with a ticket?—The train Quinn was driving had the staff.

2020. The train the accident happened to was the last that was run with a ticket. How did Quinn's train get into the section at all, even supposing you were working this line with a train staff and ticket and block; would it not have been a breach of the block regulations for this second train to have come into that section until the first train had got to Castlegregory Junction?—That is so.

2021. How is that so?—Quinn was allowed in on the section with instructions to keep a sharp look out for the special before him.

2022. Who by?—The station-masters at Aunascaul and Dingle.

2023. Is that the habit of working?—We have been in the habit of working that cattle train on that system, the old time interval and in order to block that system we were erecting the telephone to Aunascaul.

2024. Therefore, practically, you were working this line contrary to this undertaking on the old time system. I will say no more about it, but that it is so?—That is so.

2025. (*Mr. Harrington.*) I am afraid the sudden start from the top of the hill was an endeavour to get away from the coming train which was not blocked?—If you notice that special was supposed to start at 1.5, the ordinary train was not to leave until 3.30.

(*Mr. Harrington.*) We have the fact that the disaster had only occurred and the man had only got 300 yards on the line when he stopped the incoming train.

(*Major Marindin.*) It is quite possible Redshaw, knowing he was being followed by another train, would make the best of his way down the hill.

(*Witness.*) There is another thing that has not appeared in the evidence when I heard of the accident to the special, I telephoned to the station-master at Camp Station to send back immediately a red flag to stop the incoming train, he did so, and that would have been sufficient to stop the train had not O'Leary been on the spot at all.

(*Major Marindin.*) I want a nominal return of the killed and wounded up to date; how many passengers in all were there in the train?

(*Witness.*) Thirty-seven.

2026. (*Mr. Horgan.*) How many in the second train?—I cannot say.

2027. (*Mr. Huggard.*) We admit there was a breach of the undertaking in not sending a telegram to clear the line. You could have sent a telegram through the public telegraph office?—Not in time to have the train started in time.

2028. And you were erecting a telephone wire?—We expected to have it up in a fortnight.

2029. Yesterday there was a question that wanted some clearing up as to communicating the rules to the different drivers and officials. Graves swore he never got them and said he could produce a man who never got them; are you able to inform the court did Graves get one of those rule books or did he not?—I gave it to him myself, and a short time after I gave him a bundle of them for the engine-drivers, and I have an engine-driver here to prove he saw them in Graves' possession.

2030. In addition to the fact of his getting them, when compiling them did you consult with Graves as to any point in connexion with the speed?—I did.

2031. Were you conversing together as to the speed down that incline?—He said he would not like to come at as much as 10 miles an hour. I said, "We will err on the side of safety and say six," and this has been the rule ever since.

2032. (*Mr. Harrington.*) Then you did give instructions to come six miles an hour down that incline?—Certainly.

2033. Are you convinced now that that was in itself a breach of the rule as to speed, as to Skirlough gates?—As to Skirlough gates there appears to have been some misunderstanding regarding the speed. However, the difference is only one mile an hour.

2034. The men to whom you gave these books recently you got receipts from them?—I got receipts on memorandum forms. A great many of these forms, I understand, were distributed by Graves.

H. Quinn recalled.

2035. (*Mr. Huggard.*) Have you any knowledge of this matter, as to whether Graves got these instruction books or not?—I got the books myself from him.

2036. (*Mr. Adams.*) The black instruction book—Yes, sir, and they are coming in this morning by the Dingle train from my own house.

2037. (*Mr. Parkes.*) Is his handwriting in those books?—It is in some of them.

2038. (*Major Marindin.*) How is it you have so many copies of this book?—I got two or three of them.

2039. What did you want with more than one of them?—Some of them got dirty.

2040. They were all alike?—Yes.

2041. (*Mr. Harrington.*) Did you say yesterday you never read that book?—No, sir; but I said I did not take notice of anything about Camp Bridge.

(*Major Marindin.*) Now, gentlemen, I am very much obliged to you all for your assistance. That closes the public proceedings.

(*Mr. Harrington, M.P.*) On behalf of the professional gentlemen here, I am sure I am expressing the opinion of all, when I say that we are extremely indebted to you for the courtesy with which we have been treated, and we have every confidence in the result of this inquiry.

The inquiry then terminated.

I certify that the foregoing is an accurate and full (save for some condensing and exclusion of irrelevant matter) transcript of the proceedings at this inquiry reported by me in shorthand.

CHARLES RYAN,
3, Carlisle Terrace,
Terenure Road, Dublin.

June 16th, 1893.